Number Four — 1976

THE LORAM STORY

Featuring Loram Maintenance of Way Inc.

LORAM

Message from Management

R. A. PEPPIN
President
Loram Maintenance of Way Inc.

It has often been said, "a project can only be a complete success when concentrated team effort unites all aspects of the work." Our story in this issue — the design, fabrication and use of a new product — was made possible by that kind of effort. The Loram Rail Grinder goes into service as the result of total involvement by all concerned.

Words alone cannot express my personal admiration and gratitude to every one of our employees who worked so hard in the development and completion of this equipment. I am confident that the leadership, dedication and spirit of working together that has been displayed, will continue to be a vital factor in this company's contributions to the railroad industry.

Experience and collective knowledge on the part of our engineering, marketing and operations people have enabled us to meet the challenges of our industry head-on. The many details represented by planning, research, development and fulfillment are brought together through personal involvement in the company's objectives.

As we improve our services and expand into new products, teamwork will always be a decisive factor.

R. A. Peppin

THE LORAM STORY

Vol. 24 1976 No. 4

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Railroad Committees Meet
Annual Barbecue

Front Cover:

Fresh off the assembly line, painted, and wearing the company ensignia, the new 24-stone Rail Grinder is ready for action.

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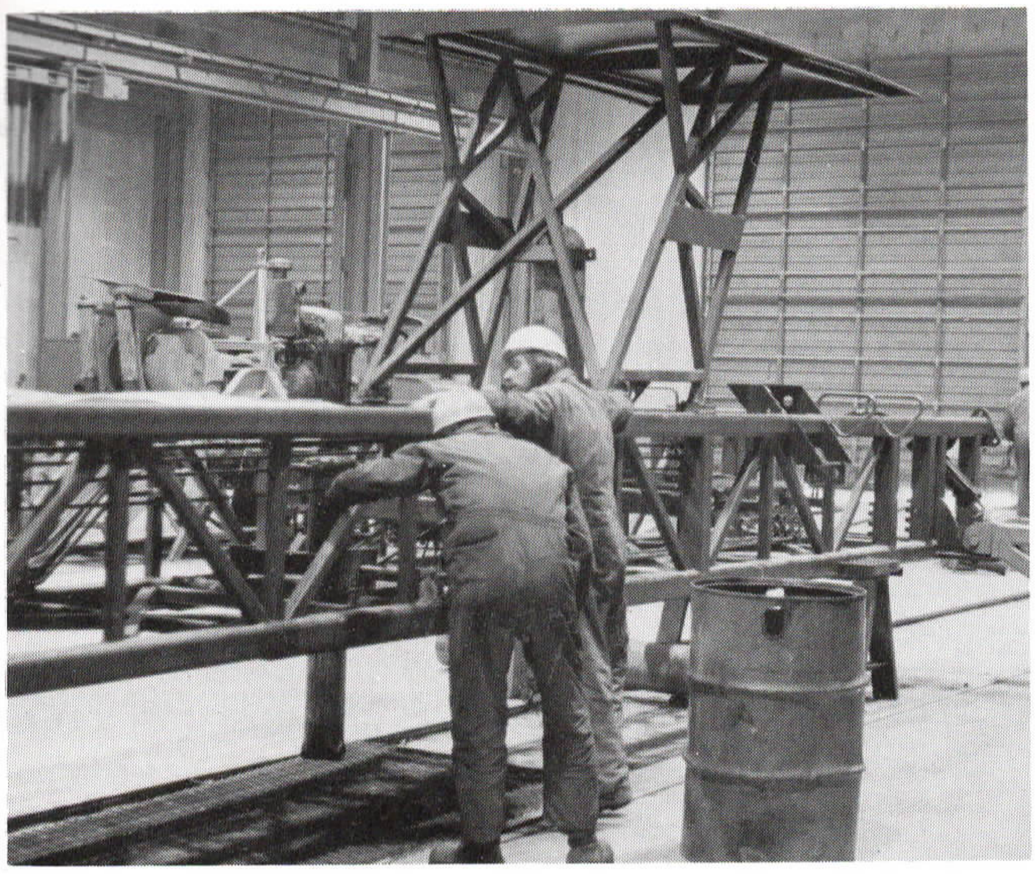
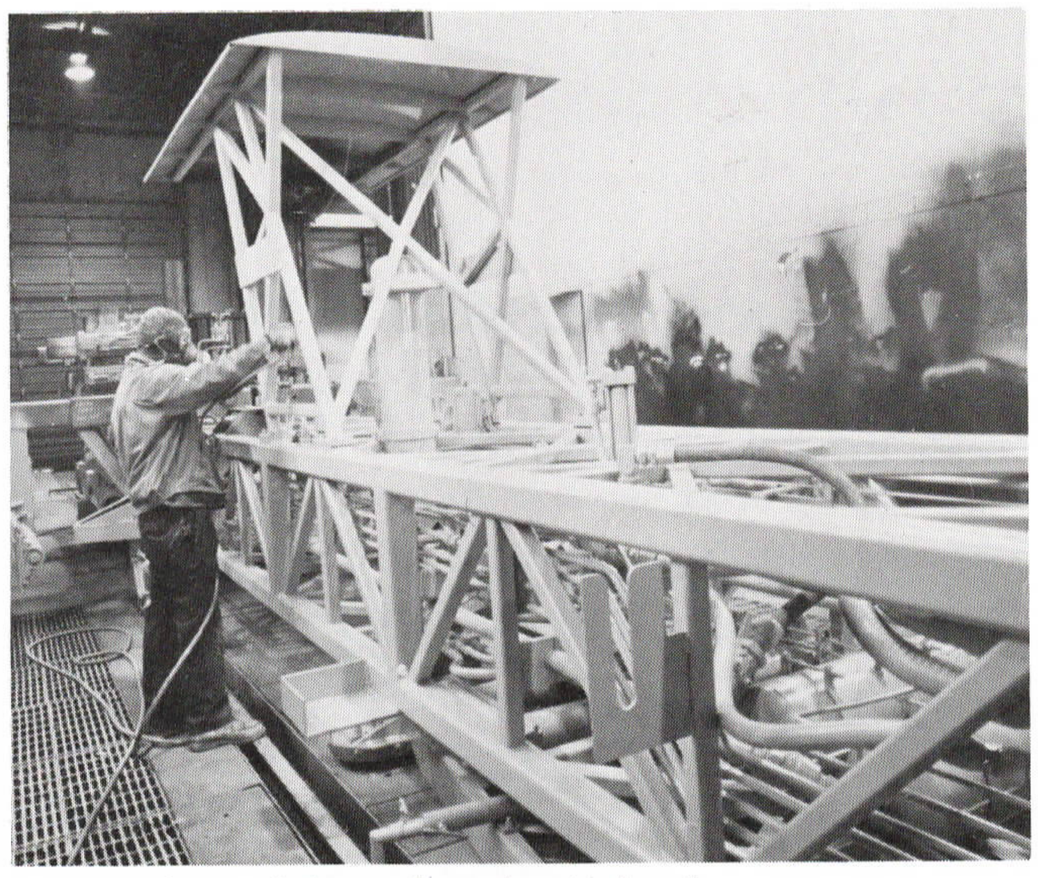
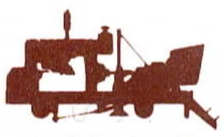


Early stage of Autosled assembly in shop.



Completed Autosled goes through paint booth.



WINCH CART

AUTOSLED

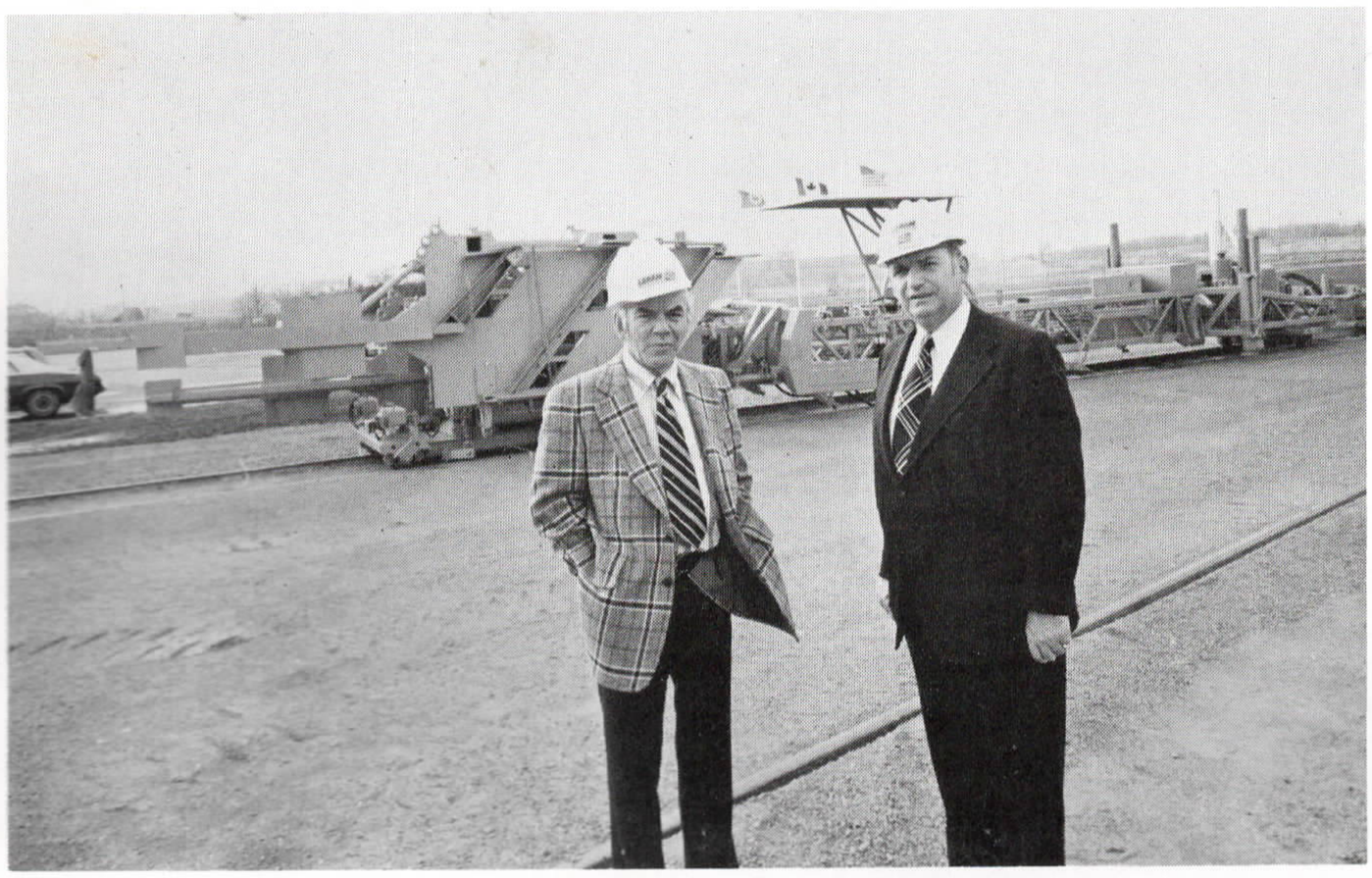
MULTI-PURPOSE MACHINE

Lease Fleet Grows

AUTOTRACK WITH PLOW AND SLED

SHOULDER BALLAST CLEANER

TIE INSERTER



A comprehensive program to upgrade the Loram Maintenance of Way lease fleet was begun in mid-1975 with the building of several Autoplows and Autosleds. These added to the wide range of equipment that is manufactured and made available to railroads by our plant facilities in Hamel, Minnesota.

A unique design change incorporated into this program allowed for interchangeability of autoplow and autoplow components, used with a standard rear frame. Recent changes in railroad safety procedures were also included in these design modifications.

According to President R. A. Peppin, "the standardization program will be of substantial benefit in use of equipment and its scheduling." This program will extend to 1980.

In spacious yard adjacent to Maintenance of Way shop, Marketing Manager Jim Gavin explains operation to P. G. Clarke (left), leading to newest fleet addition in background.

From Design Concept

The why and wherefore of rail grinding clearly outlines the problem and the need for specialized equipment that will solve it.

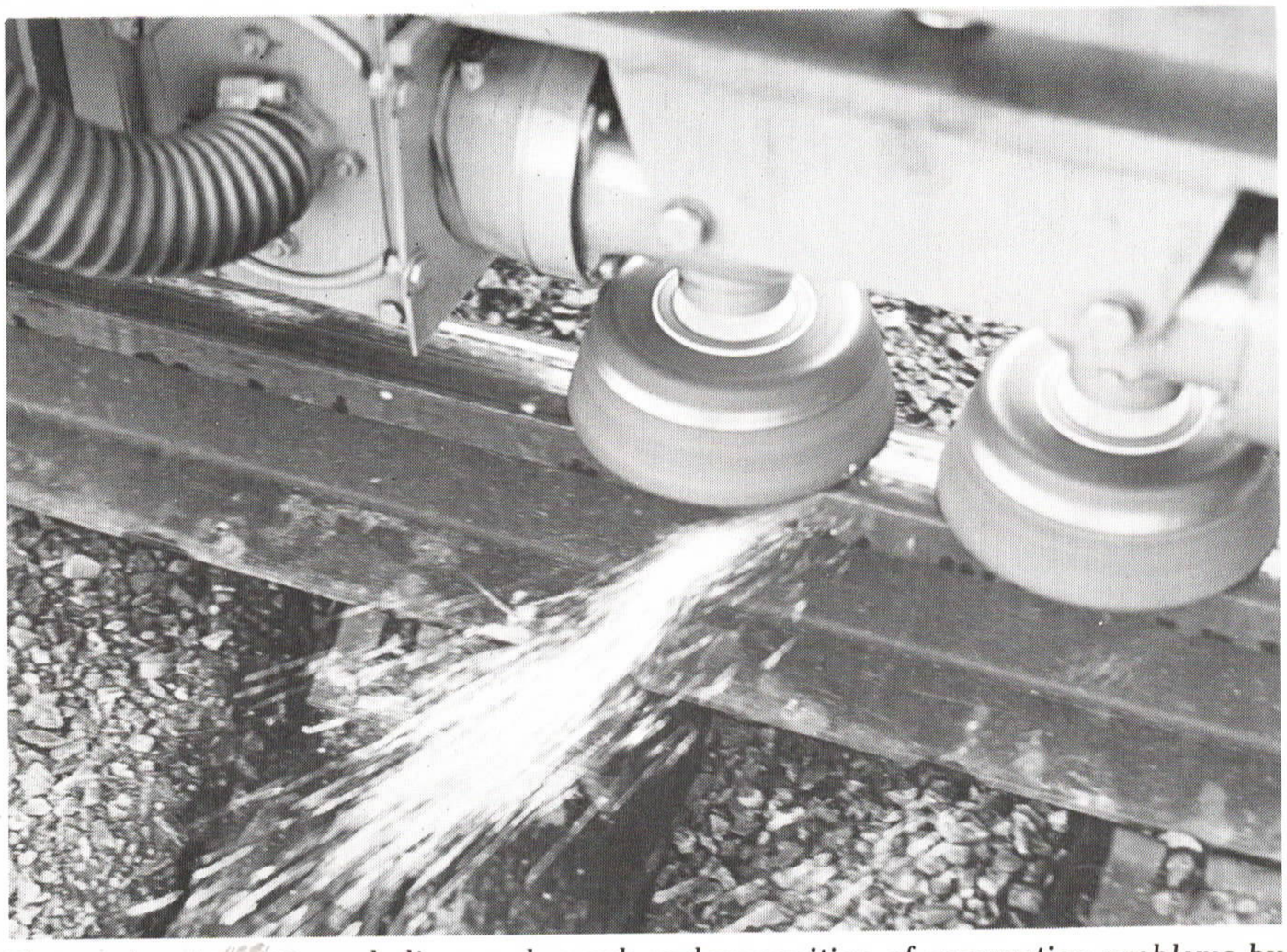
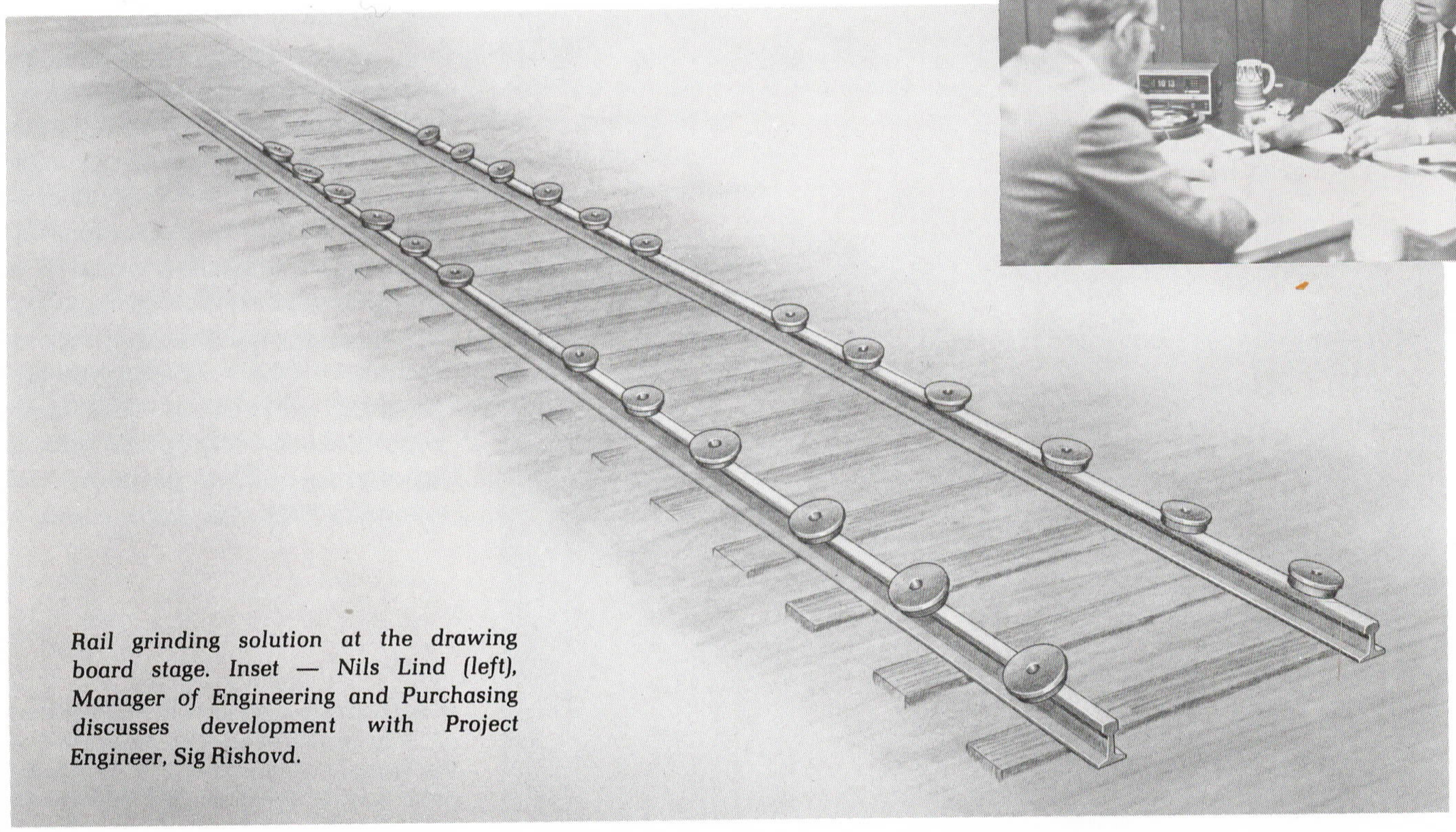


Photo taken in 1959 symbolizes early work and recognition of corrugation problems by Maintenance of Way.

Increased tonnages, heavier axle loads and deteriorating maintenance of railroad track has, in recent years, presented ever increasing problems to the railroad engineer. He has seen his rail lines deteriorate in spite of improvements like welded rail, heavier ballast sections and other recent innovations.

We have all experienced driving on a gravel road and the sensation of hitting a section of tooth-rattling cross-corrugations known as "washboard" — common at stop signs, hills or anywhere traffic conditions contribute to their formation. Railroad track is subject to a similar problem. Like the driver, the railroad engineer wants to know why this has



Rail grinding solution at the drawing board stage. Inset — Nils Lind (left), Manager of Engineering and Purchasing discusses development with Project Engineer, Sig Rishovd.

— to Finished Product

become predominant in recent years, and how it can be corrected.

Several theories have been expressed as to the cause. Firstly, with heavier axle loads and unit train operation, the point of contact between rail and wheel is so concentrated that the metal flows forward. The flow builds to where the wheel jumps the metal flow, causing a corrugation. Secondly, under heavy traffic conditions, a rythmn is established which sets up a constant pattern as the wheels pass over the track. This uneven pattern develops into corrugated rail lines.

Railroad associations, trying to determine the cause, may still be years from a definitive answer. In the meantime, the solution is the same as for the gravel road — smooth off the high spots to restore a level plane.

At Loram Maintenace of Way, an intensive research program was begun to develop equipment to reduce the effect of corrugation. It became apparent that the problem developed and intensified slowly at first. At 20 to 30 million gross tons per year, it accelerated rapidly. Thus, grinding the rail to a smooth running surface had to be at a frequency related to the amount of traffic.

Armed with these facts, design parameters were established. The Loram Rail Grinder had to be capable of removing three to five thousands of an inch of metal at a pass, be self contained and self propelled, grind at an efficient speed, and move quickly to and from the job location.

From tests, we showed that the entire top surface of the rails could be ground with a minimun of 12 stones for each rail. While extensive tests were in progress at the manufacturing facility, the engineering department was putting together detailed drawings, beginning with an artist concept. As test results were evaluated, minor changes in physical arrangement were made.

Weekly meetings, held between marketing, engineering and production, reviewed all aspects of design and application — a team endeavor that reflected in the resulting development of the Loram Rail Grinder.

Beside the finished product, shop personnel include (left to right): Warren Witt, Ed Sakry, Shop Superintendent Len Lawrence, Jeff Gehsmer, Cal Varner, Ben Johnsen and Tom Muehlberg.

The Engineering Details

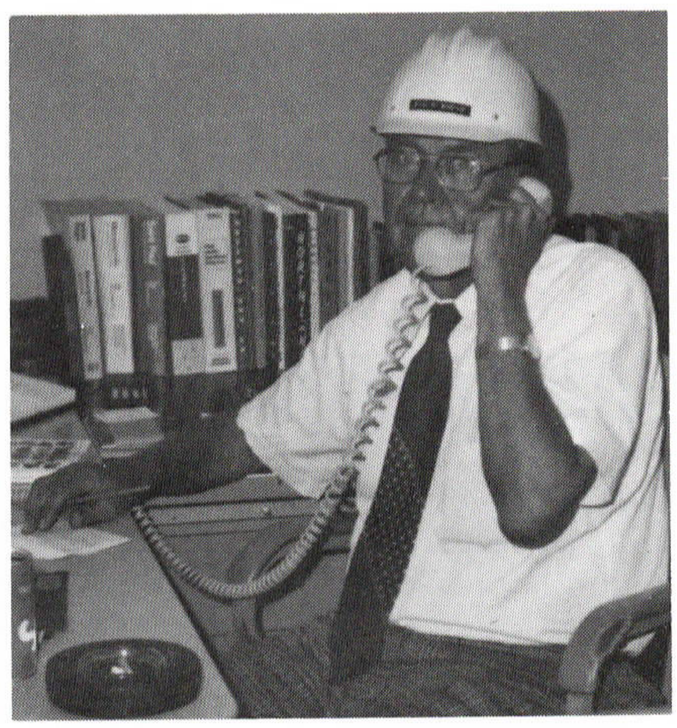
One of countless meetings that ensured coverage of every detail. Left to right (seated) are: Nils Lind, Chief Engineer John Appelen, Detail Draftsman Randy Cross, Project Engineers Bob Vieau and Sig Rishovd and Layout Draftsman Don Neff. Standing — Bill Klempke, Design Engineer; Tim Bad Heart Bull, Design Draftsmen; and Harry Strus, Layout Draftsman.

With initial sketches, markets surveys and feasibility studies behind them, our Engineering Department moved rapidly into final stages of development. Loram's 24-stone, self-propelled Rail Grinder became technical reality.

Each row of 12 grinding stones is divided into groups of 3 stones to a carriage assembly. Each carriage is guided by two vertical slide tubes, pivoted at the frame at the upper portion and rigidly secured to the carriage. These are raised for travel and lowered during grinding.

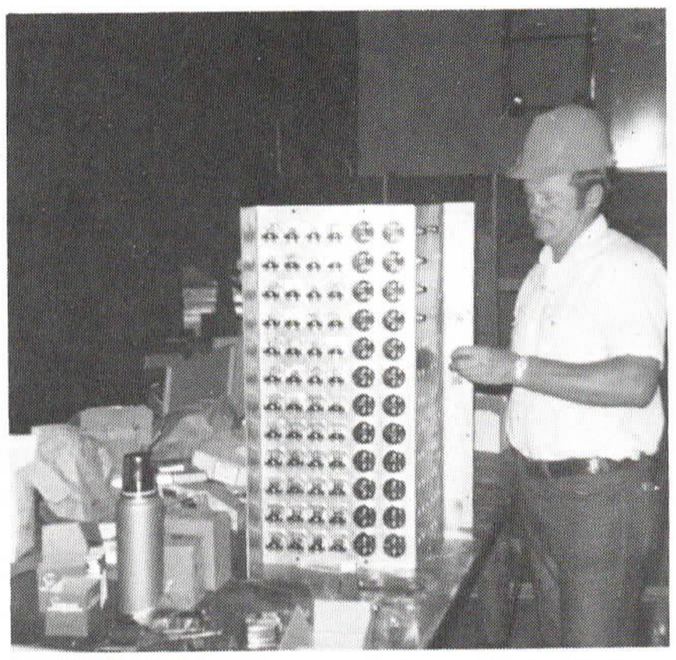
From the operator's console, solenoid valves lower the carriage assemblies. Set against the gage side of the rail, all 24, 15 h.p. grinding motors are started in sequence and grinding can begin. One of the unique features of the machine is the individual control of each carriage assembly which permits positioning on a super elevated track.

During grinding, the hydraulic pressure is maintained so that stones always grind at the same plane and distance from the gage of rail. To eliminate grinding in the valley of the corrugation wave, a hydraulic snubber was



Sig Rishovd, in typical pose.

Heart of the Rail Grinder is this 15 hp motor that direct drives each stone.



Operator's console is pre-wired before being positioned in cab of Rail Grinder.

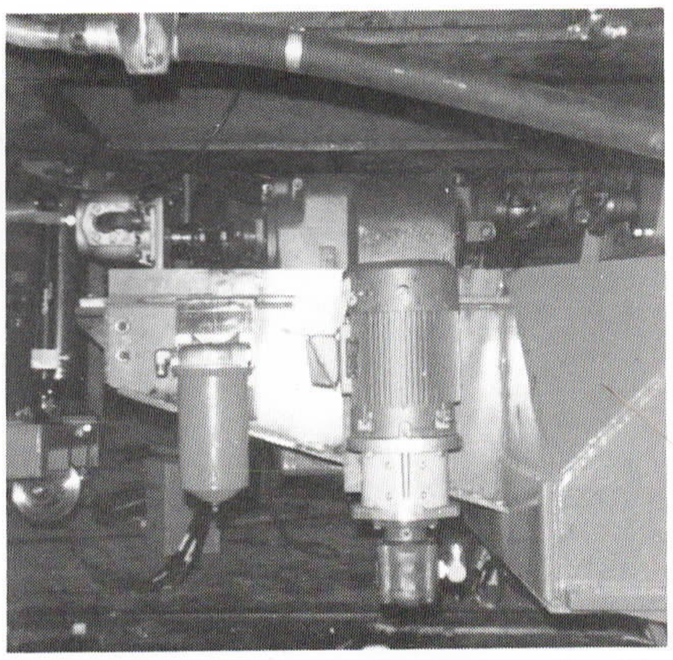


Photo shows carriage and drive truck with frame mounted as machine takes form.

designed to limit the drop of the stone. It operates on the principle of a shock absorber on an automobile. The pantograph-mounted structure of each carriage holds the grinding motor at the same angular position, at any stone thickness.

We had established that a definite relationship exists between horsepower and weight on the grinding stone to the amount of metal removed and economic stone life. This made it desirable to be able to vary the weight of the stone according to type and hardness of rail, as well as various weather conditions.

During grinding, the operator monitors the control console, where he can determine the amperage drawn by each of the 24 motors. Since amperage is the measure of the horsepower expended, he can control the operation of individual motors to provide maximum metal removal. Mechanized counterweights automatically allow for the proper weight applied against the grinding surface, thus maintaining a constant balance.

In a relaxing moment above, camera catches (left to right): George Linehan, General Superintendent; Shoulder Ballast Cleaners: Nils Lind, Manager, Engineering and Purchasing; and John Appelen, Chief Engineer.

Right: Last minute check over is given to the Rail Grinder before getting its final paint job.

Below, participants in completed machine include left to right (standing) Bob Vieau, Glenn Shannon, Nils Lind, Sig Rishovd, Don Neff and Al Jenkins. Kneeling are Joan Lamprech, Randy Cross, Bill Klempke and Tim Bad Heart Bull.

Some Facts

Rail Grinder Weight —
an estimated 124,000 lbs.

Length — 88 feet
Width — 10 feet
Height — 15 feet

Wheel Dia. — 33 inches

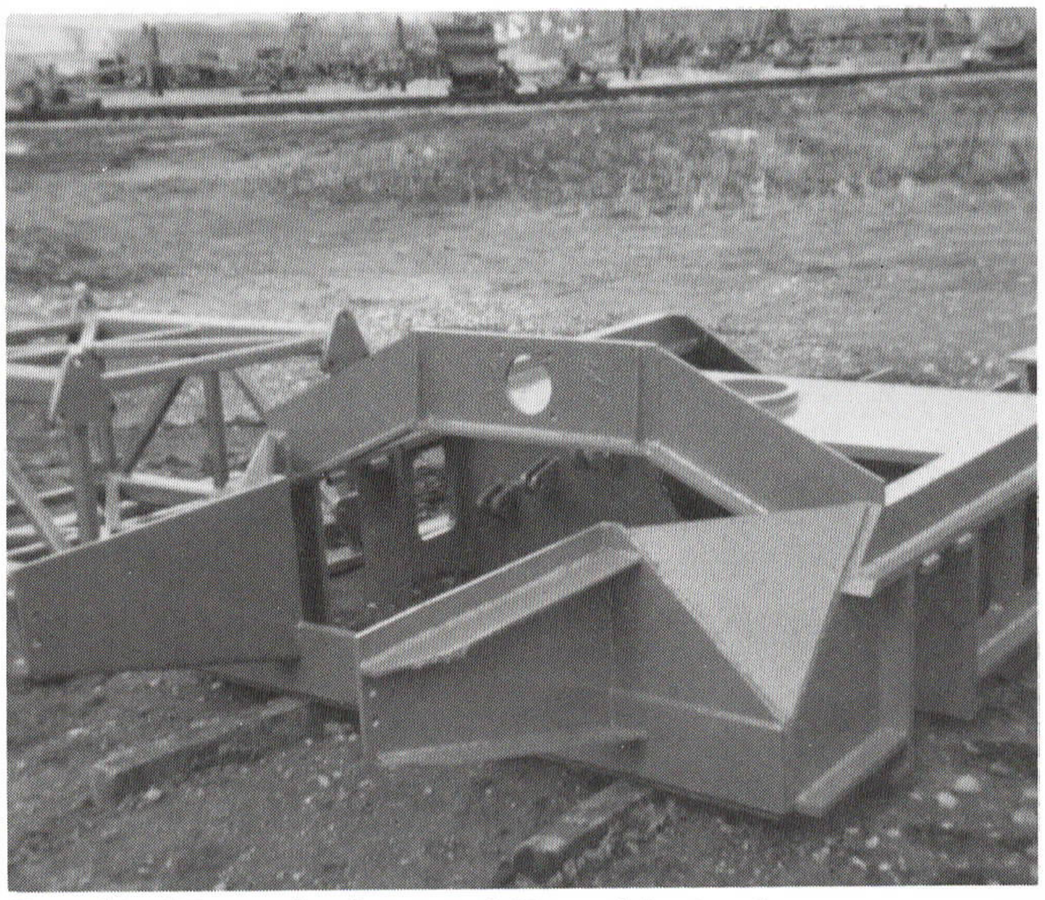
Grinding Speed — 0 - 3 m.p.h.
Transport Speed — 25 m.p.h.

Gradeability — 6%

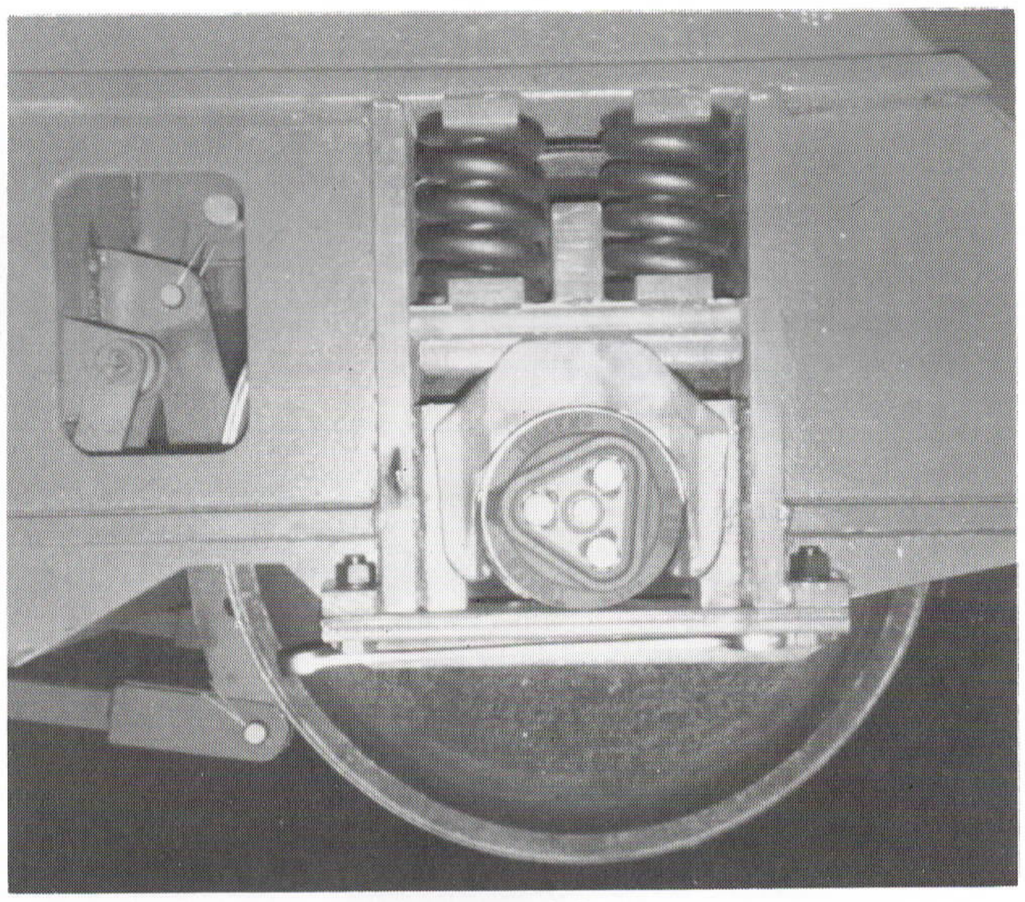
Stone Angular Adjustment —
15° to 20° each side of vertical

Power Units — 2 Diesel Electric
287 hp., continuous, each with hydraulic accessory pumps and air compressors.

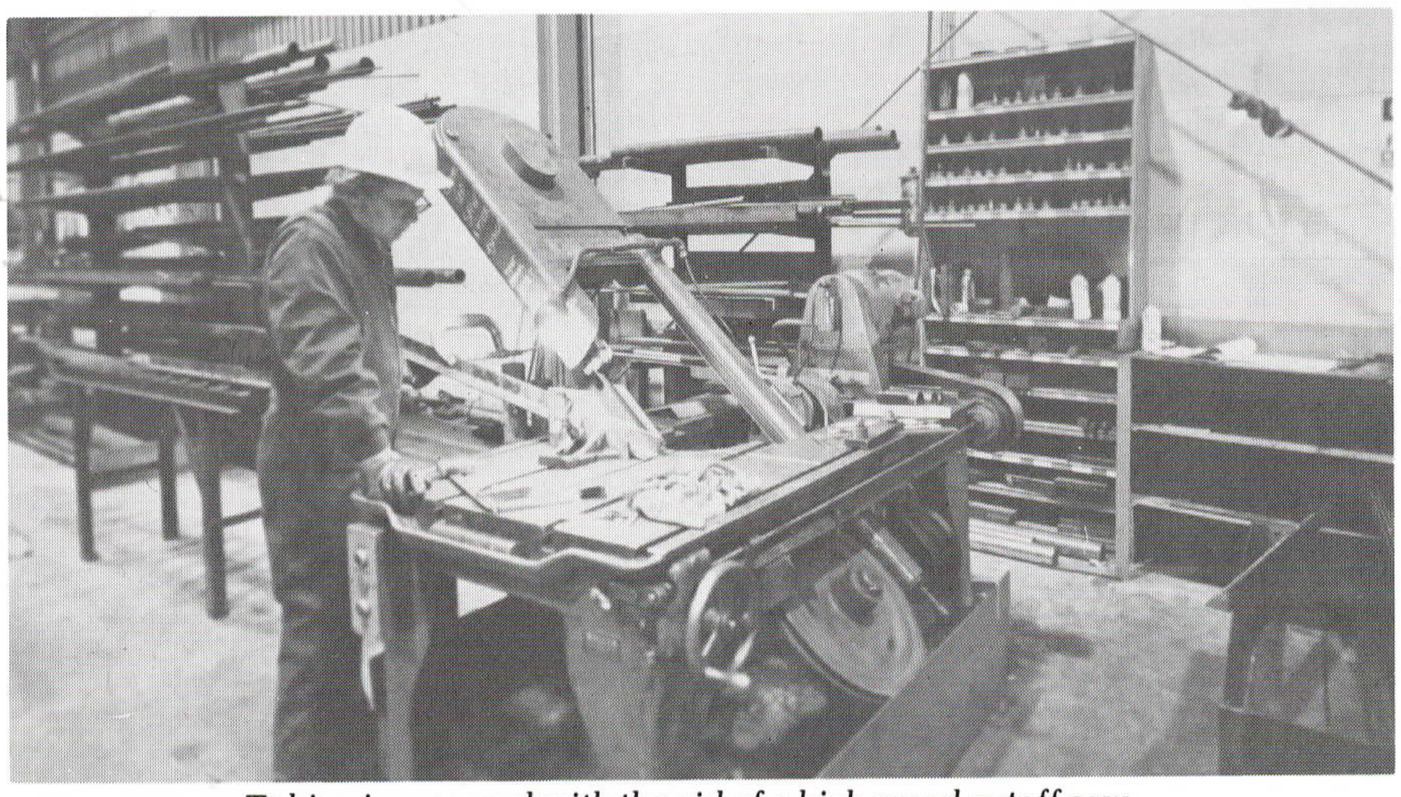
Shopwork and Testing



Completed Frame for the prepulsion or drive truck.



Drive truck suspension reflects good design.



Tubing is prepared with the aid of a high speed cutoff saw. .

As engineering drawings were completed, component parts for the machine were ordered. As they were received, work began on cutting steel, basic weldments of sub components and components. Wherever possible, proven systems were incorporated such as drive propulsion trucks already proven out in Shoulder Ballast Cleaner operations.

Exhaustive testing of carriage assemblies and grinding modules were conducted. These represented several years of actual operation under the most adverse climatic

Basic layout and weldments are one aspect of assembly work.

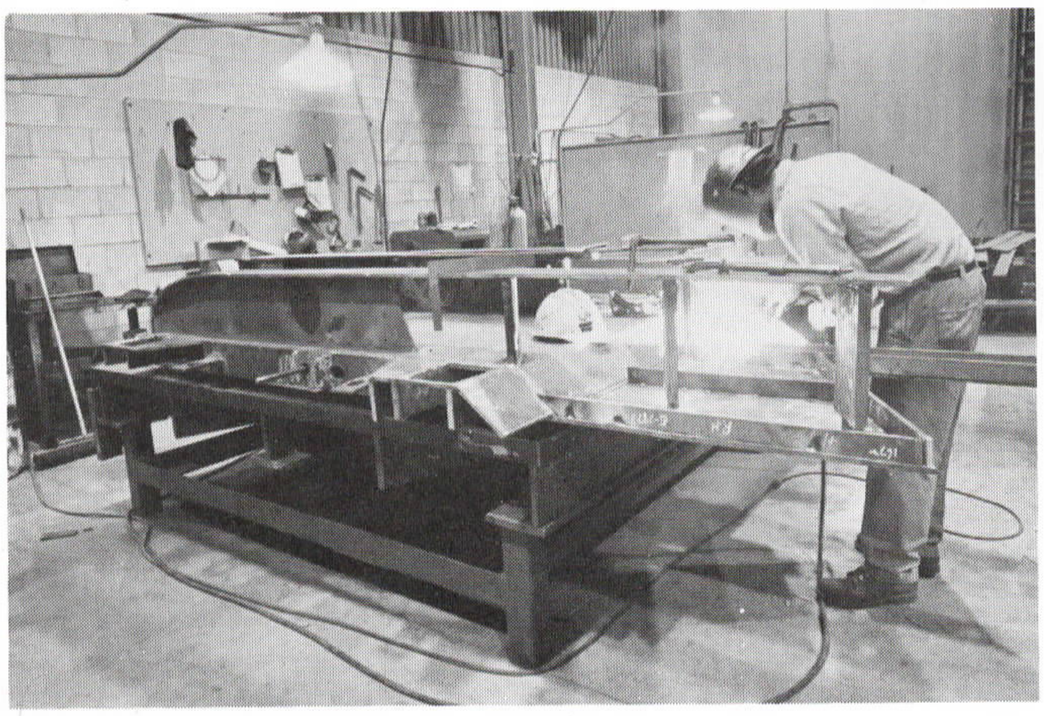
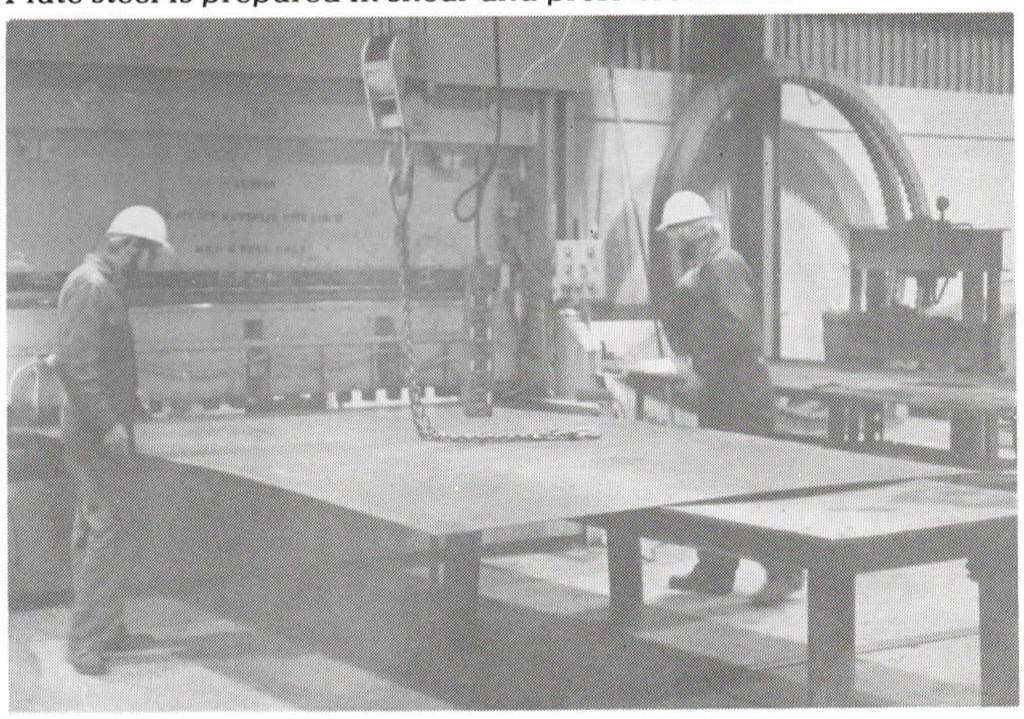


Plate steel is prepared in shear and press break area.



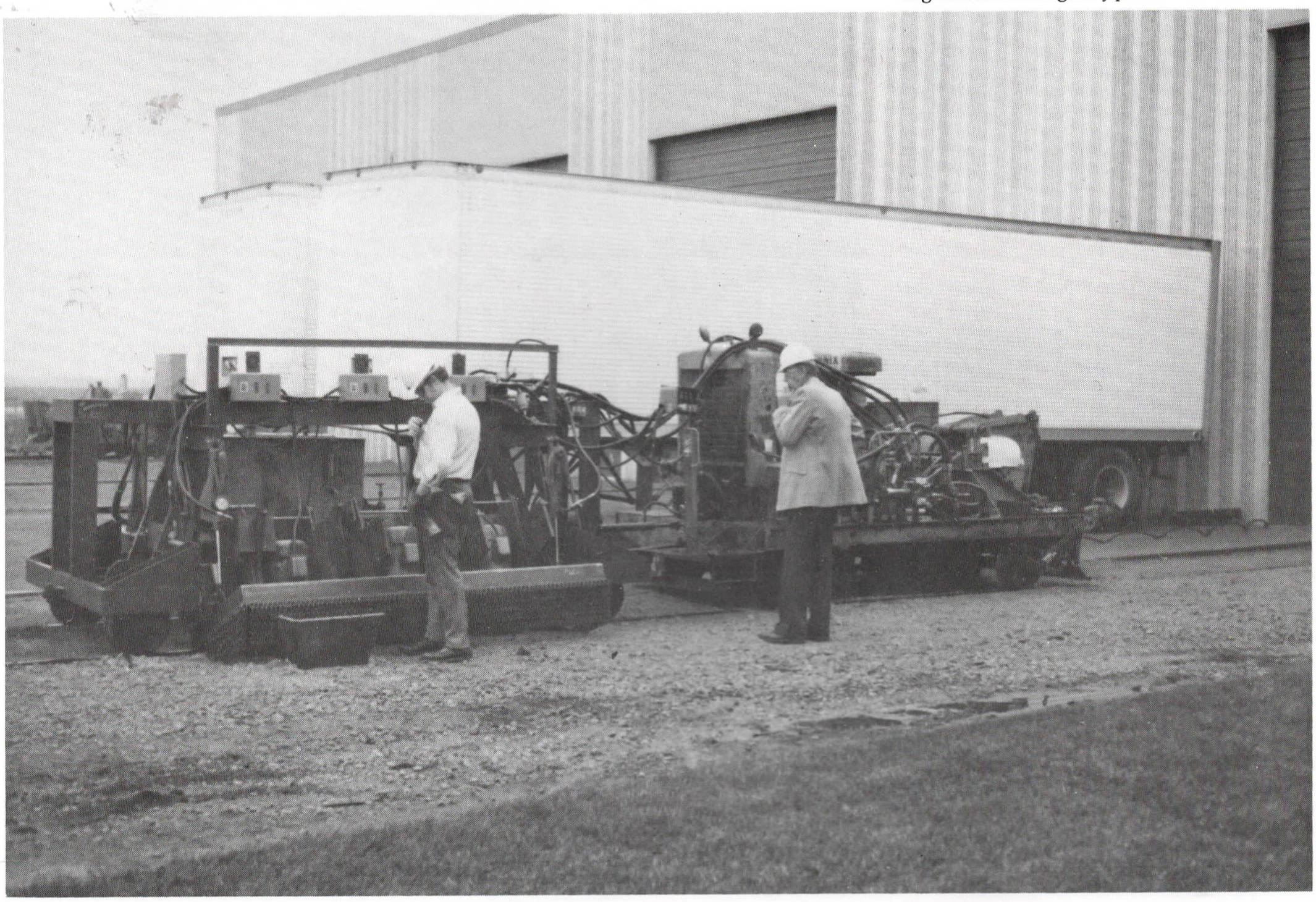
Warren Witt works on assembling hydraulic fittings for the new Rail Grinder (upper left photo).

Above right, A. R. Cummings from Calgary office gets a preview of test module from President R. A. Peppin (right).

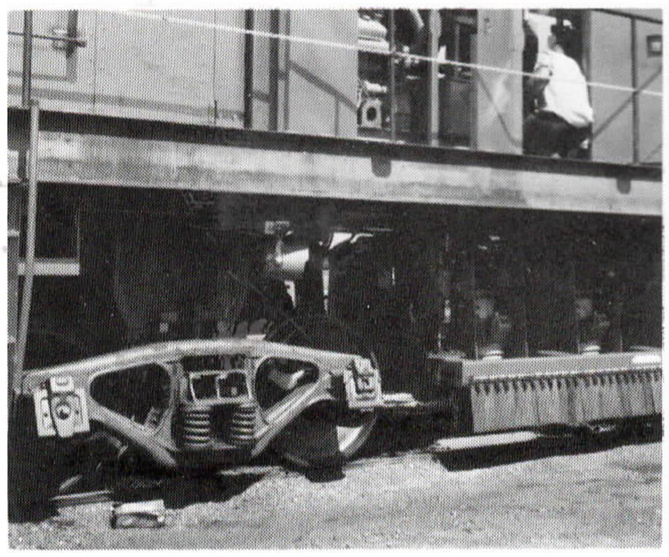
Below, all phases of test performance are checked on test module under the eye of Sig Rishovd at right of photo.

conditions to prove out product durability and reliability.

By September, 1975, a test module had determined design application, grinding stone life and equipment durability. After five months of testing the proven design was submitted to the shop for inclusion in the final unit. Through all these events, Marketing was in constant contact with the railroad industry to solicit comments that would ensure the finished product would meet all specifications and needs.



Above, 88-foot-long Rail Grinder is ready for operation. Below, insulation of engine compartments receives a final check over for tough service conditions.



Grinding Operations

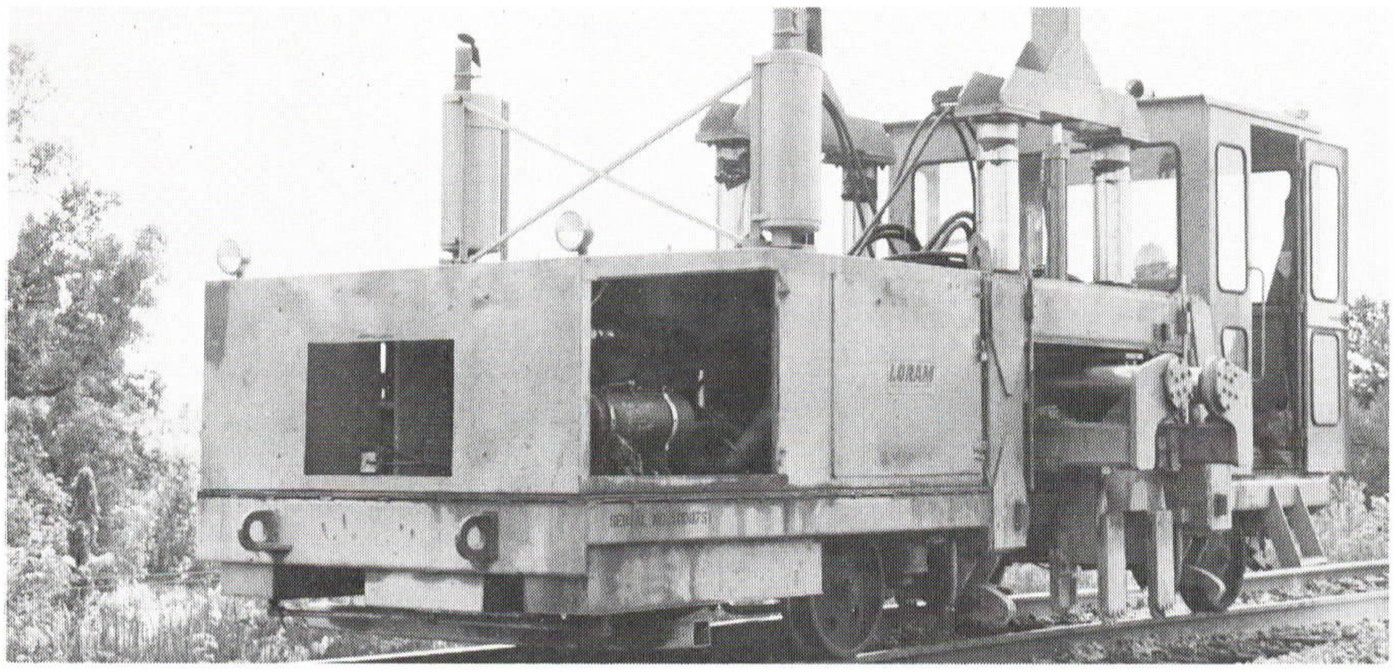
Production of the Rail Grinder was achieved 30 days ahead of schedule thus permitting acceleration of a planned two-month test and evaluation program. Now in effect, it will be performed under the most severe rail and weather conditions. Working conditions will permit full evaluation, including economic grinding wheel life and optimum performance.

The machine will be operated across the mid-east and northeast part of the United States and evaluated by several top railroad representatives from the U.S. and Canada. In early November it will be en route to the Quebec Cartier Railroad in northern Quebec.

Early in the coming year the Quebec operation is expected to provide terperatures to -50 degrees F, wind and snow conditions, all taken into consideration by management foresight and design planning. The hydraulic system includes thermal heaters, extra heavy insulation of engine compartment shrouds as well as hydraulic reservoir and control areas.

Other operating precautions include external electrical plugs for use during storage periods, and high capacity heaters in the engine compartments and operator control area. It is important to note that as a matter of policy, all major components are standard and readily available to minimize downtime and provide maximum reliability and performance.

Crib Skeletonizer



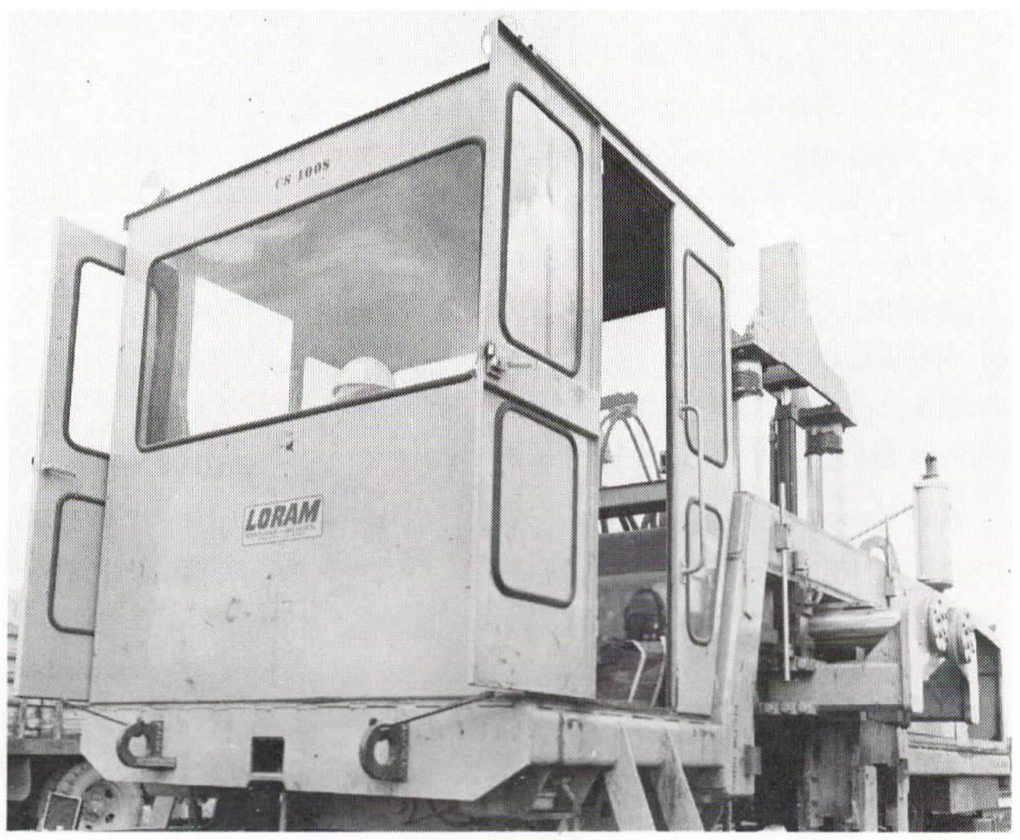
Above side view of cribber in travelling position. Close-up below shows hydraulic-initialed components in action.

Mud is a continuing problem in the ballast section of a track structure. A new machine designed and built by Loram Maintenance of Way removes this fouled ballast quickly and efficiently, two cribs at a time. Completed in the fall of 1975, the Cribber has been undergoing extensive field evaluations.

In early June of this year, a project was begun near the Detroit area on the Chesepeake and Ohio (Chessie) System. According to J. P. Sunderland, Director of Engineering Progress, "This heavily travelled industrial track serving the automobile industry is ballasted with limestone. Over the years, this has deteriorated to a cemented condition. The Loram unit has shown the ability to remove this fouled ballast, allowing us to replace it with crushed granite, thereby allowing the track to properly drain and stabilize."

The project calls for removal of fouled crib ballast by the Crib Skeltonizer over a distance of 18 miles. Because of the heavy traffic congestion and limited track time, the job will take several months to complete.

Below left is operator's position where he has total view of all digging operations. Rear view below shows full comfort cab.



One of four Loram Shoulder Ballast Cleaners, working for a better American rail System.

Maintenance of Way Contributes

With the establishment of the ConRail System (called Unified ConRail, or simply Big ConRail) the resulting system consists of about 17,000 route miles of line. Total trackage covers over 32,000 miles compared to the original ConRail's 29,800 miles. In their 10 year rehabilitation program, planners broadened the program to rehabilitate the additional mileage.

At 8 a.m. on "take over day", April 1, 1976, Loram Maintenance of Way Inc. responded to a request from Engineering Officer J. Gordon with the commencement of a program involving four Shoulder Ballast Cleaners. These machines, working on a 2-shift basis, 7 days a week, will result in a conservatively estimated 3,000 track miles being cleaned in 1976.

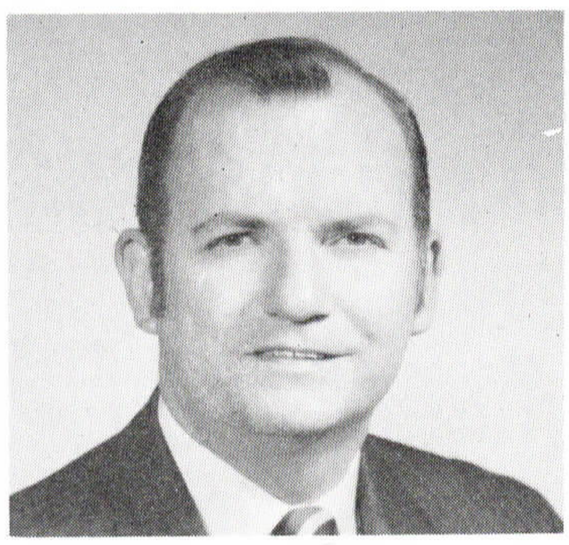
All four Loram units will concentrate on 3 regions of the new network — the central region headquartered in Pittsburg, the southern region in Indianapolis and the western region in Chicago. In addition to the ballast cleaning program, ConRail owns and has in service, fifteen Loram Tie Inserters.

According to Railroad Age, even though properties were conveyed to ConRail on April 1, track rehabilitation was getting under way last year, made possible by funds provided through the Rail Reorganization Act. These funds enabled rehabilitation work to be performed prior to conveyance "to alleviate further deterioration which might otherwise occur".

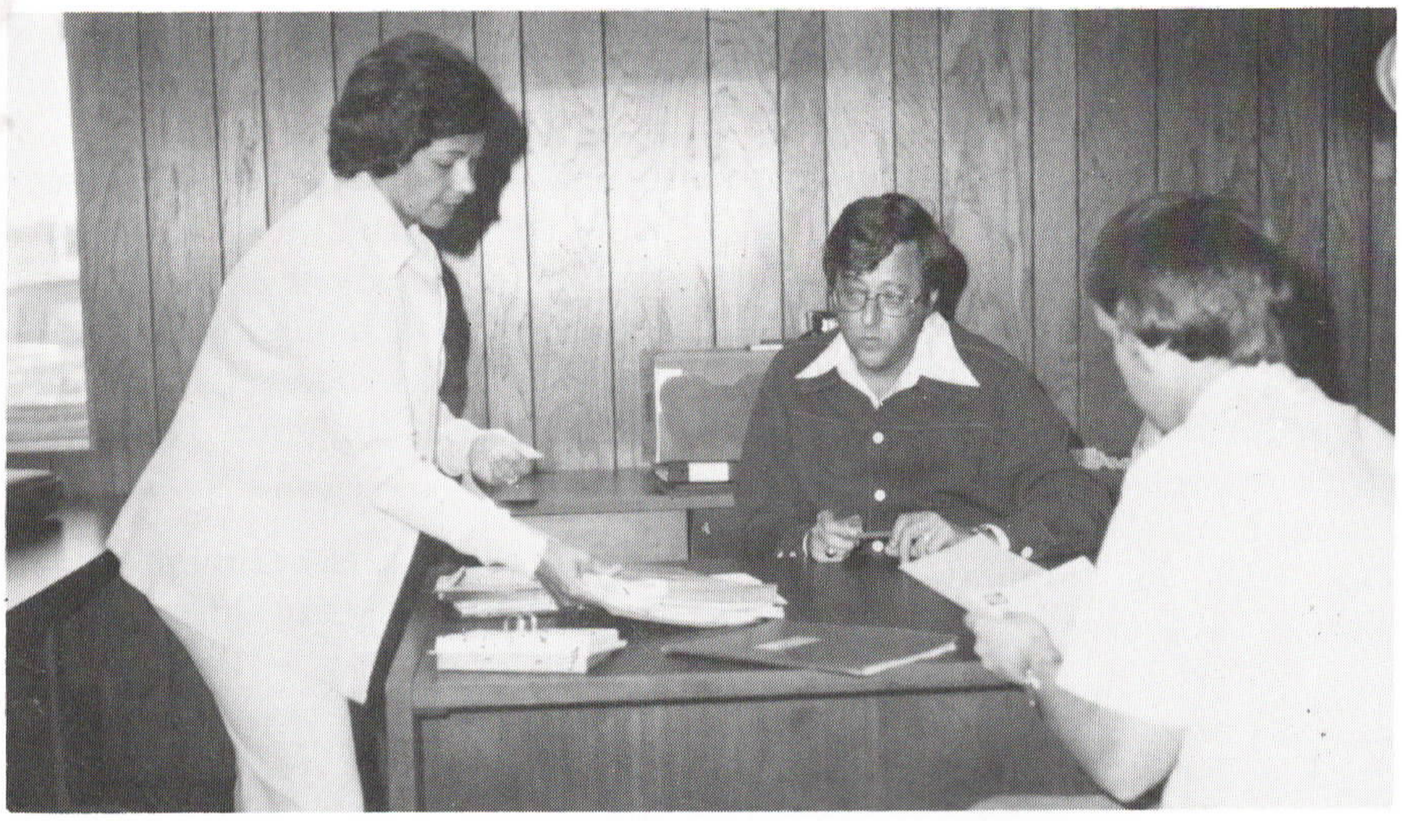
One of the first steps was the purchase of new tie inserters to boost maintenance of way activities. The 10 year plan includes the installation of 42.61 million ties.

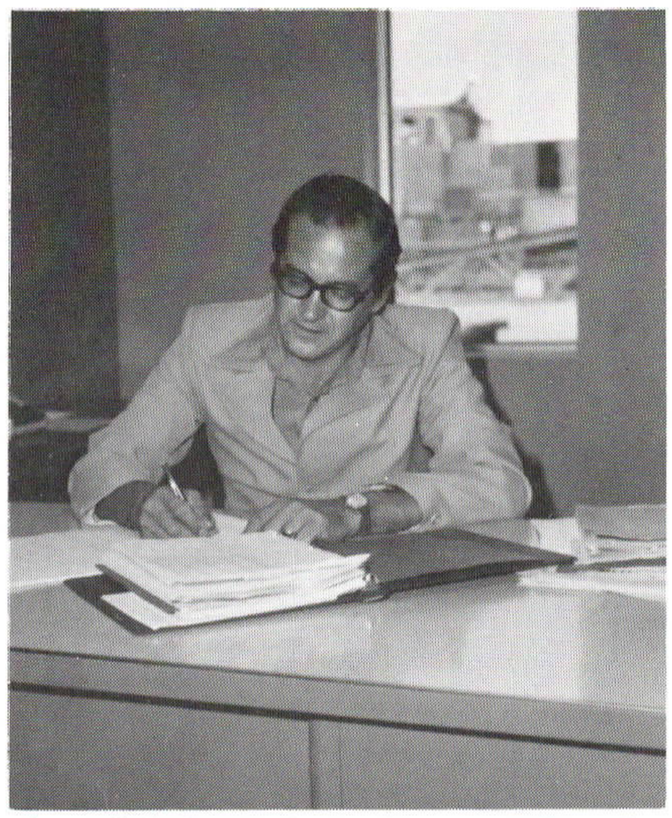
Railway Age notes that the usual concept of ConRail is that it represents an effort to convert a group of bankrupt railroad lines into a single profitable system. More important but often overlooked, ConRail is a gigantic exercise in the economics of property rehabilitation, especially the track.

Predictions for success are based in some degree on improvements in efficiency that are expected to stem from track rehabilitation. We at Loram Maintenance of Way are proud to be contributing to that end.



J. E. (Jim) Gavin, Marketing Manager for Loram Maintenance of Way Inc., was elected to the Board of Directors of the REMSA early this year. The Railway Engineering-maintenance Supplies Association represents a group of manufacturing and supply companies serving the railway maintenance of Way industry. Mr. Gavins' directorship is for a period of three years.





Above left, Receptionist-Secretary, Dorothy Hartinger, Controller Bill Puchner and Ron Riley. Above is Otto Ridl, Financial Accountant.

Support Services

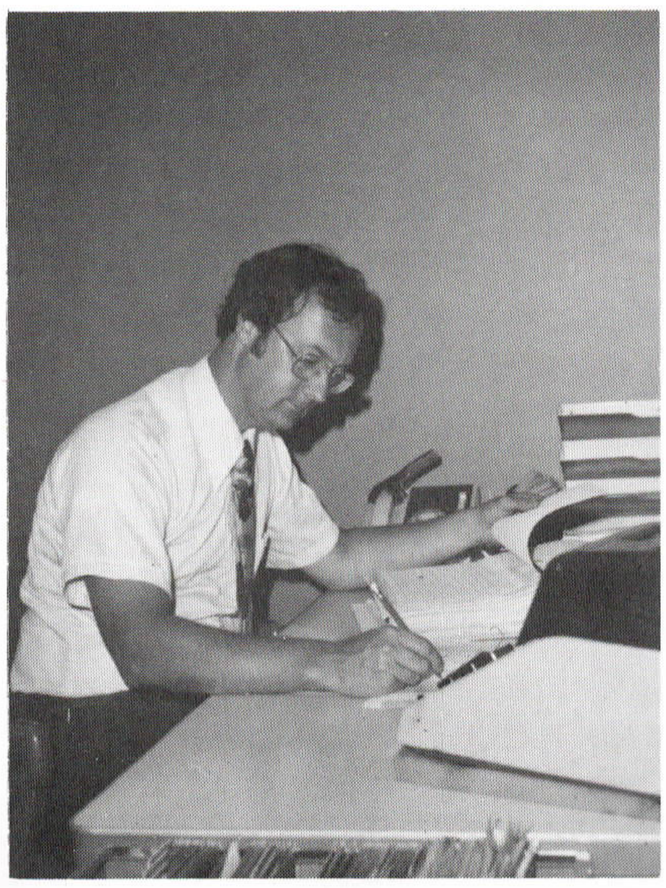
W. J. (Bill) Puchner, as Controller of Loram Maintenance of Way Inc., is strongly convinced of the value of the positive attitude of his associates. In the course of the company's progress, its Accounting area has grown substantially over the past year.

"A fine mix of experience and enthusiastic newcomers forms a strong nucleus for the future," says Bill. "With the establishment of departmental and individual goals, their periodic review, and the taste of success in meeting these goals, there is an excellent relationship between the people in this company."

The refined systems and work schedules of support services serve the needs of management, marketing, engineering, production and operations. They have resulted in a mutual recognition of each others' problems and an awareness of what is expected and required — all essential ingredients to team spirit.

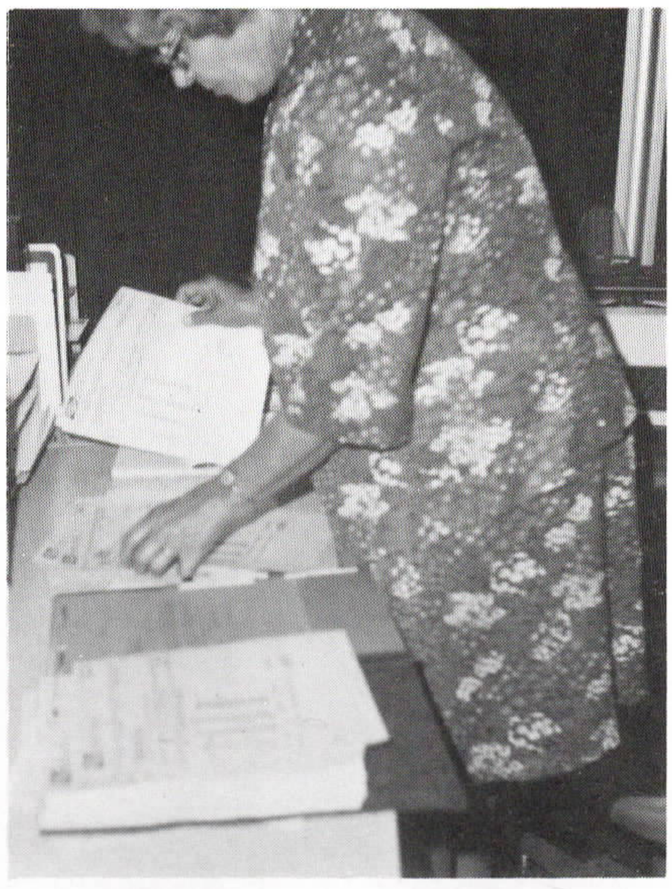
This sense of co-operation between all departments has been supplemented by recent co-ordination of reporting and other services, along with development of a computer system designed to serve the interests of company and customers alike.

Ron Riley, Costs and General Accountant.



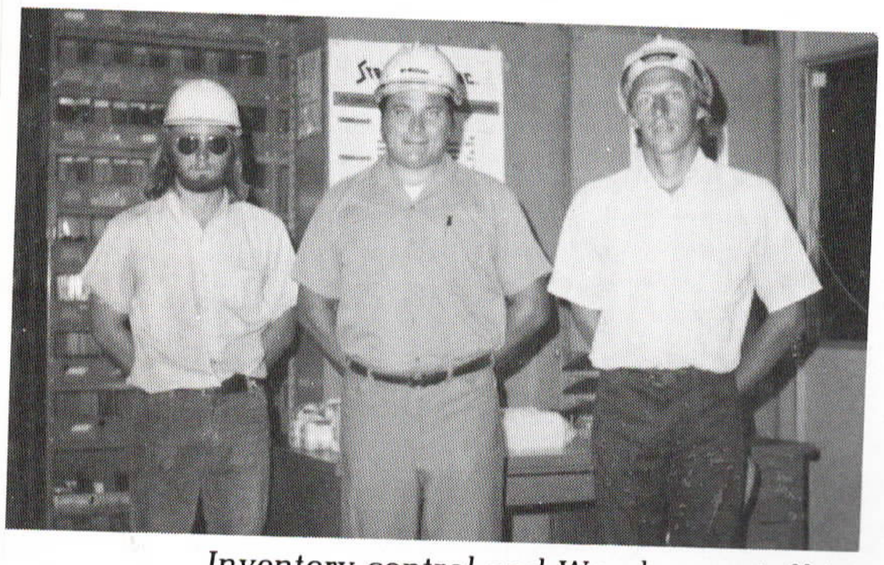
Tom Marquardt, Purchasing Agent.

Bonnie Gliniany, Accounts Payable.



Mary James, Accounts Receivable.

Materials Departments Make Strides



Inventory control and Warehouse staff include (left to right): Chuck Isaacson, Darrell Jensen and Tim Gale.

The rapid expansion of Loram Maintenance of Way, Inc. over the past few years has demanded that each department keep pace. In the past year the Inventory Control, Warehousing, Shipping and Receiving Departments have not only kept up with the pace, but are ready for future expansion.

A universal parts numbering system was established by Inventory Control and Engineering. All parts were identified to the new numbering system. Inventory Control records were updated to show usage against all parts used by Loram Maintenance of Way, Inc. This laid the foundation for a high-low Inventory Control system, resulting in better service to our customers and lower dollar value in the Inventory. The steel inventory was organized and recorded the same as the parts inventory, enabling a smooth flow of raw steel to production. The present inventory control records can give accurate costs to all work orders from a single weldment to a major piece of railroad maintenance equipment even before the project is started.

Receiving parts, tagging them with their part numbers, putting them in the proper location and notifying Purchasing and Accounting what was received is all one day's work for the Receiving Department.

The Shipping Department prides itself on establishing shipping performance records. Over ninety percent of all customer orders not requiring special fabrication are shipped in forty eight hours or less. Effective warehousing, along with the high-low Inventory Control system, has kept customer back orders to a minimum.

The challenge of the coming year will be met with the same pace setting standards and ideas by the "can do" personnel of these departments.

Having the Last Word

When industrial safety is involved, the Occupational Safety and Health Department is the last word and when it's complimentary — it's worth repeating.

G. A. Shannon

In June 1976 "the man from OSHA, State of Minnesota, visited the Loram Maintenance of Way shop. He showed his credentials, stated the purpose of his visit and proceeded with his inspection.

He asked about employee representatives being on the Safety committee, reviewed Loram's OSHA records and explained the nature, scope and purpose of his visit to a welder on the shop floor. (It is the responsibility of the employer to furnish each of his employees with conditions and place of employment that are free of recognized hazards.)

The OSHA investigator explained that employees must comply with OSHA standards, and all rules, regulations and orders pursuant to this Act, which are applicable to his own actions and conduct.

By this time the inspection is in its third hour and has reached the walk-around stage. The man from OSHA notes electrical cords, outlets and wiring. He checks paint storage, warehouse, lunchrooms and lavatories.

The grinders come under intensive scrutiny and fire equipment dates are checked for last servicing. The entire floor area of the shop is covered; air flow through the paint bay is checked with a flow meter. Little if any shop equipment is overlooked.

The final stages of inspection draw near — the judgement (in this case, two minor violations). Then came the last word. There will be no penalties issued and "Loram has an excellent shop" — a statement seldom made (according to the investigator) during his years with OSHA.

We will continue to work for safety and a perfect score next time. Those words have a nice ring to them!

Glenn A. Shannon
Industrial Engineer

A Moving Experience

A milestone is achieved as H. P. Milavsky for Scotia Centre officially hands over new building to F. L. Fenwick, President of Manalta Holdings Ltd.

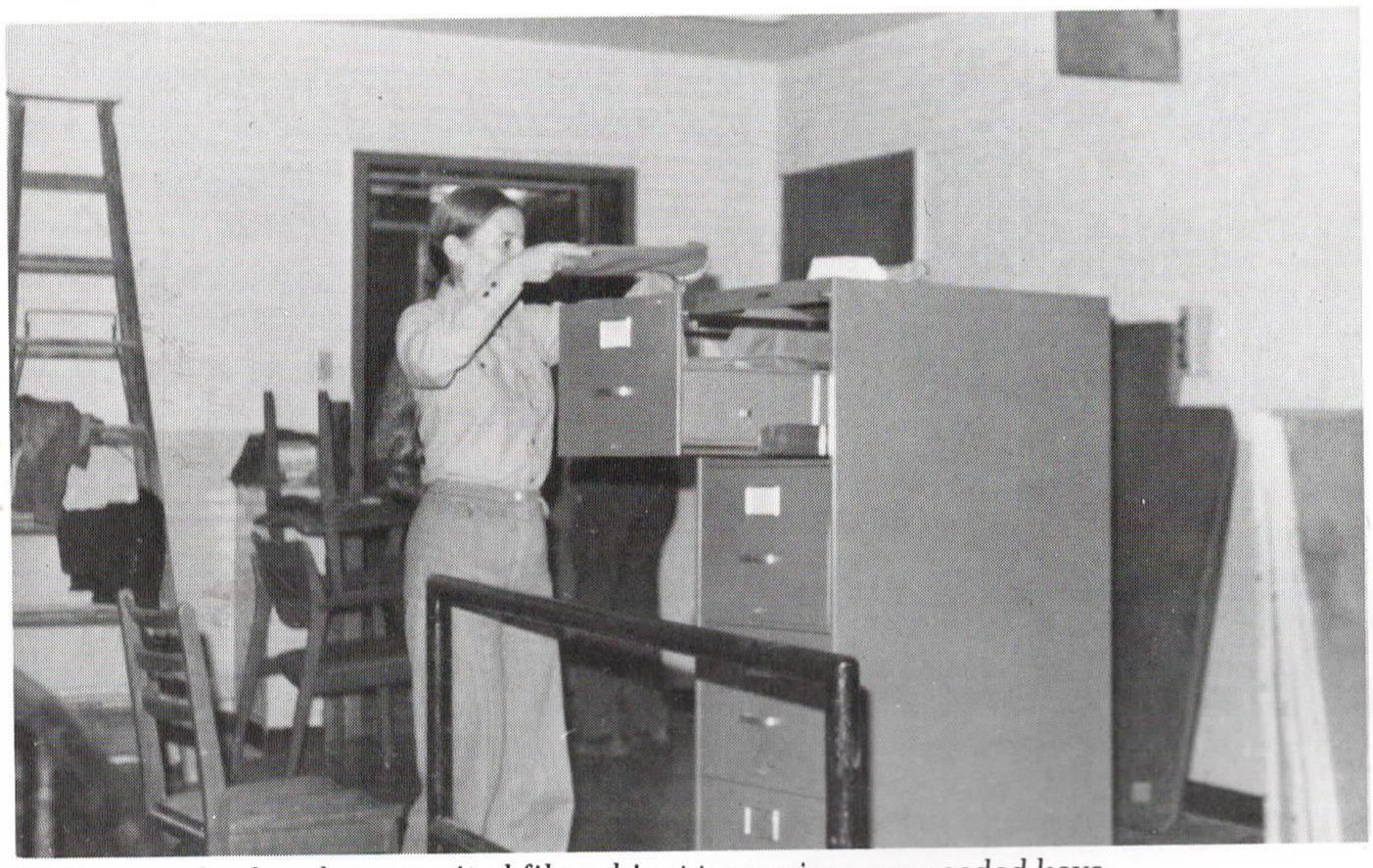
During the month of May, notices appeared in elevators, halls, washrooms and doorways of Loram offices on the corner of 9th Avenue and 2nd Street West. The message — We Are Moving — did little to imply the efforts to come, or the wheels of organization that had already been set in motion. Here was a project that was to rely on the joint planning, co-operation and involvement of every member of the group.

Official announcement of a new building for the Loram Group, at 320 - 7th Ave. S.W., came over Loram Co. President S. C. Water's signature, in mid-April. It included directive that was to make Errold Tupper, over the next two months, as conversant with the 10 story building as if he had constructed it. In addition to naming Errold as Move Co-ordinator reporting to F. L. Fenwick, it outlined the new Company locations — Loram Co. and Manalta Holdings on the 10th

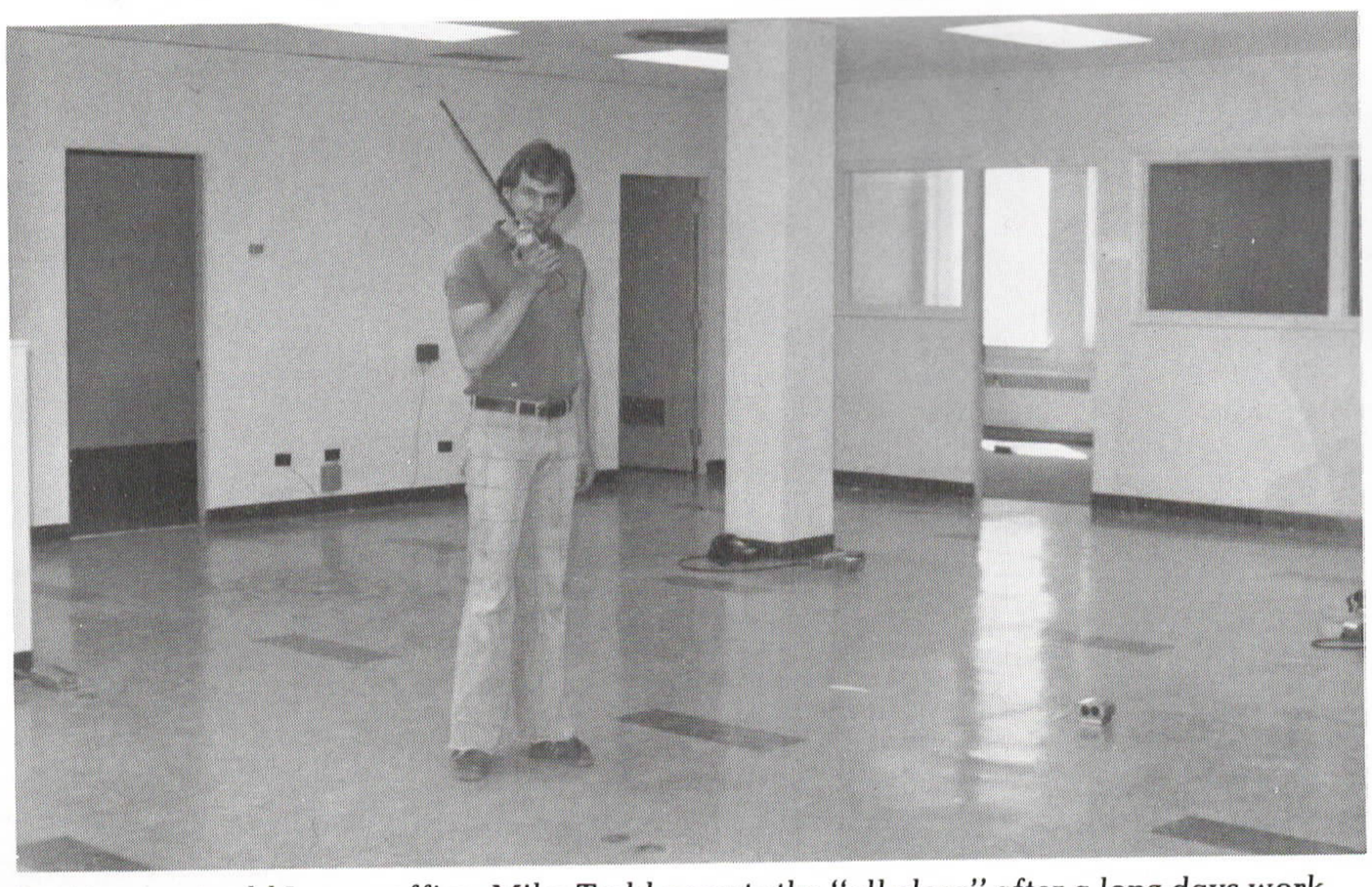
As the Building Superintendent, Harold Hedstrom (second from right) gets a tour of all areas.

Moving crew begins task of unloading first arrival of Loram Co. necessities at new building above.

As tenth floor becomes occupied above, Geoff Corry maintains communications with old building (left) and Bob Carrick directs an incoming load, right.



Jill Tupper checks a long-awaited file cabinet to regain some needed keys.



Last to vacate old Loram office, Mike Todd reports the "all clear" after a long days work.

floor, Pembina Pipe Line on 9, Manalta Coal on 8, Centralized Services on 7, Techman on 6, Loram International on 5, 4 and 3, and Lorinco on the 3rd floor.

On their respective floors, senior members of staff were appointed as Project Officers. They included G. Corry, H. Vaugeois, M. Mears. J. Bruce, G. Hipple and P. G. Clarke. Their efforts and those of the willing recruits in each company enabled the move to proceed on schedule. Sheldon Longworth, MacCosham's Project Manager of Office Moves, prepared all concerned, at innumerable meetings, with the realities of moving from point A to point B in a large and busy city. There were no complaints about the necessity for week-end work, when most of the moves were accomplished.

Below: Last van load leaves 9th Ave. location for the new building.

Taping the inches was an essential and continuing habit for MacCosham's Sheldon Longworth during the moves.

As might be anticipated, Mr. Longworth's 15 years of move experience resulted in the physical move being carried out as originally planned. A few notes from his diary coupled with representative photos, sum up an historic event in the life of our group.

June 4 — About 5½ hours saw Manalta Holdings, Loram Public Relations and Lorinco in their new quarters. One large piece of furniture was lowered 10 floors - down the outside of the old office.

June 5 — Loram Co. was moved in a matter of nine hours including a large cabinet and boardroom tables which, because of size had to be carried down five flights of stairs.

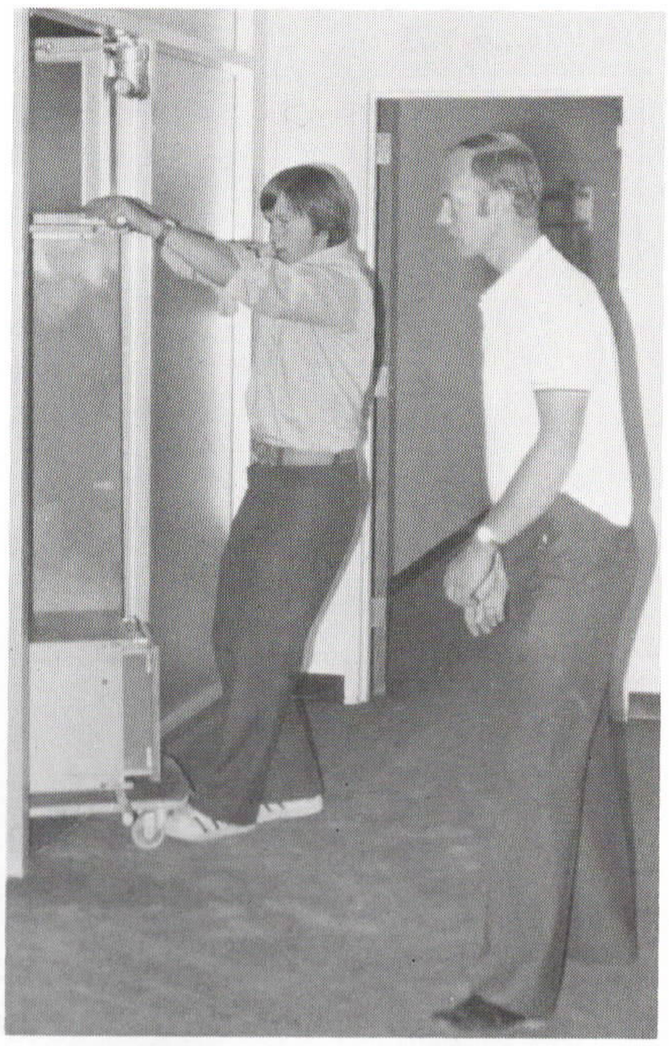
June 11 — Marketing and drafting areas of Manalta Coal were moved and pre-loading prepared the way for completion the next day. The top of an elevator was used to lower a boardroom table to ground level.

June 12 — Along with six more van loads of Manalta Coals office necessities, preparations were begun to transport Pembina Pipe Line to the new building.

June 13 — Other than one stairway trip with a special map board, Pembina's move was accomplished with smooth efficiency.

Techman work proceeds in the midst of packing.

. . . until the working space ran out.



Helen Dyer helps get Manalta Coal furnishings organized. At right, a manoever into new Manalta Coal office is overseen by Mike Mears.

June 19 — Techman was moved. Several large items were lowered down the outside of the building for loading. Again, a smooth operation marked the day.

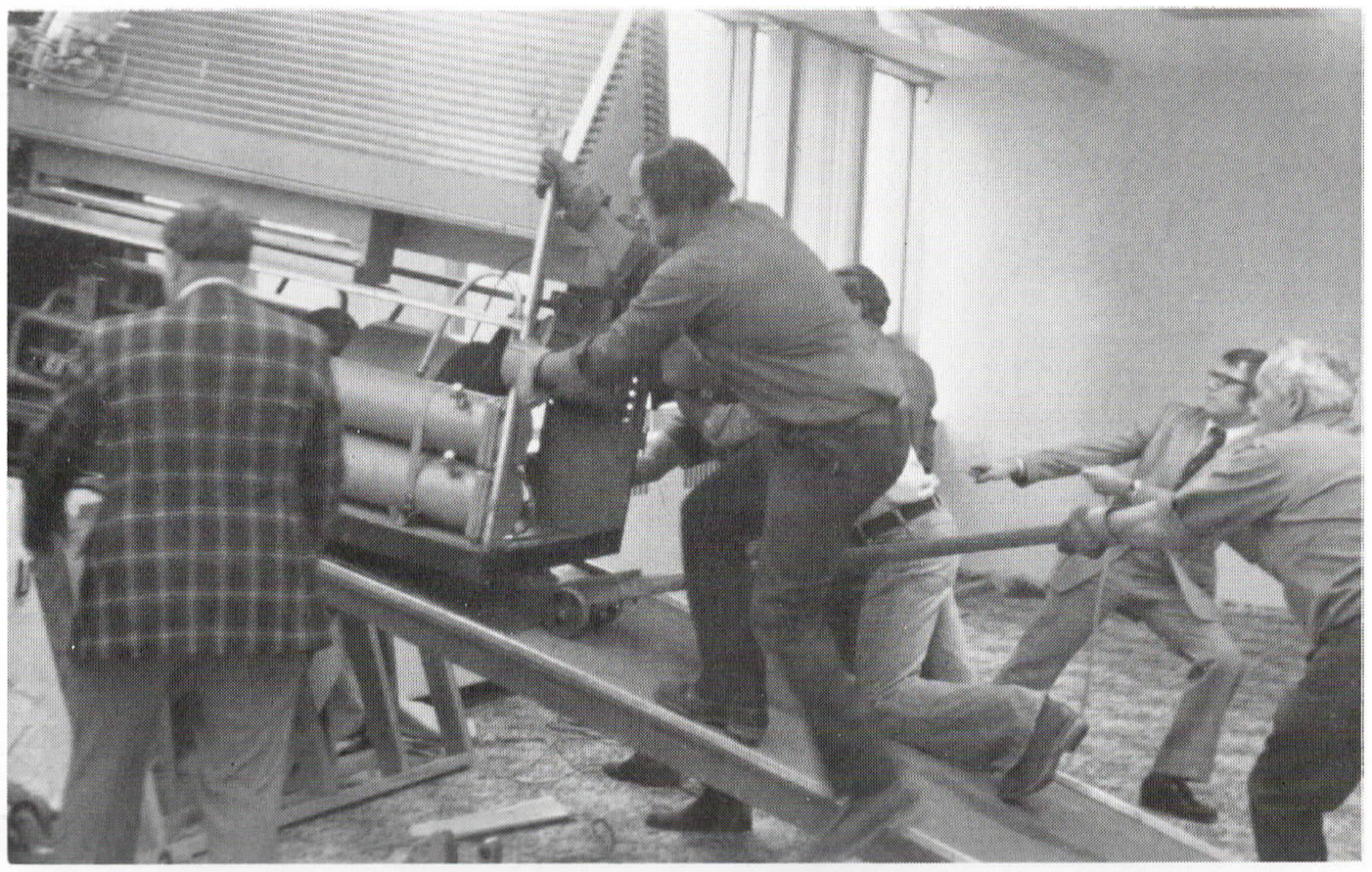
June 23 — Heavy and valuable computer equipment was transported to the new office. After supper, a crane prepared to lower an 1800 pound air conditioner unit for the Data Centre. A lift box was used to lower the unit down three floors and, on arrival at 7th Ave., up seven floors.

June 24 — A further 3 van loads were delivered in spite of an elevator breakdown and the need to maneuver around tradesmen, busy completing seventh floor work. The information Centre (and dozens of boxes of heavy books), was moved.

June 26 — Over seven hours completed a move that included Printing and Stationery, Cafeteria and Mail Room, and leaving only Loram International to be moved from the old building at the end of July.

It is noteworthy that some 40 van loads were involved in the overall move to date. Approximately 13 van loads for Loram International will bring the total to 53 loads. Estimated at over 30,000 tons, the completed job will be a credit to our own people who took part in the shipping, receiving and organizing.

Data Centre air conditioner is removed from old building by special carrier (left) and hoisted seven floors to new location (above).



Air conditioner reaches its destination in new Data Centre quarters, guided by willing hands (right).

And finally — a chance to look at one of many views from the new home of the Loram group.

Pembina Operates Discovery

. . . and some of the Exploration and Development group who are involved.

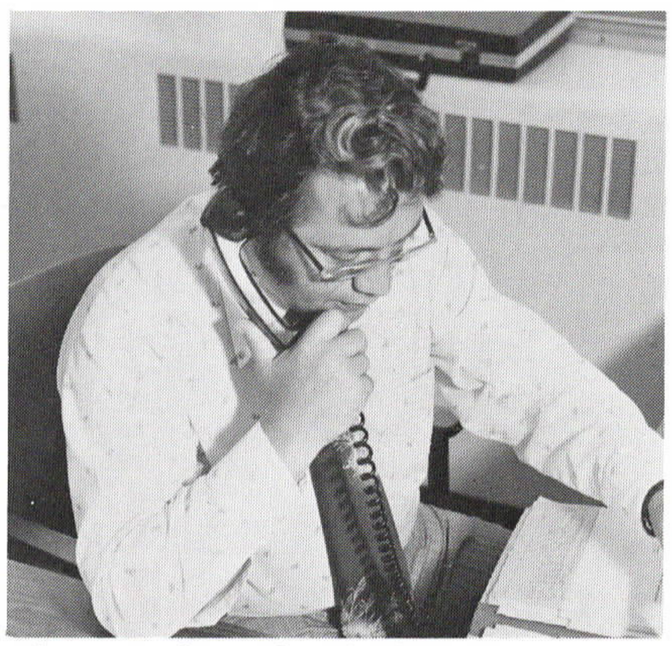
Left to right: John Forgarasi, District Geologist Ken Sanderson and Garry Montgomery review the program for the Figure Lake area.

The Figure Lake area, where Pembina Pipe Line Ltd. has a 50% interest in 5440 gross acres, is located in Twp. 63, Rge. 18, W4M. The company is operator for the drilling group.

Development commenced March 8, 1976, by drilling of a discovery well in Section 19, after a comprehensive study of subsurface geology. The well encountered commercial gas production in the Wabiskaw and the Colony Sand.

A follow-up development program was prepared and two more wells were drilled, offsetting Discovery One. Having established new pools and new reserves in the area, it was indicated by Trans Canada Pipe Line that a deliverability contract would be granted for a period of three years. Expected volume is in the 5 MMCFD range.

At present, the wells are being completed and evaluated. Being relatively close to pipe line (6 miles), the wells are expected to go on production in the first half of 1977.



Above, in the midst of a long distance call is John Forgarasi, Division Engineer. Below, Petroleum Landman Garry Montgomery assesses future land acquisition possibilities.

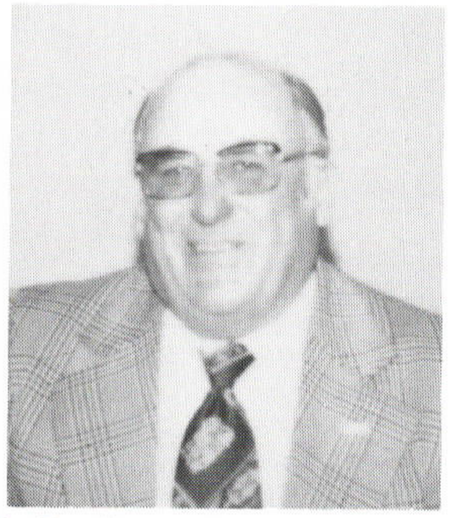
In animated discussion (left to right) John Forgarasi, Ray Sluzar, Chief Geologist: Bill Hunka, Chief Engineer; and Tom Parks, Manager Oil and Gas Division.

Manalta Coal Ltd.

Recent Appointments and Operations Personnel

A. R. Cummings, *previously Vice-President, Construction, for Loram Co. Ltd., has been appointed Vice-President and General Manager of Gregg River Resources Ltd.' — a subsidiary of Manalta Coal.*

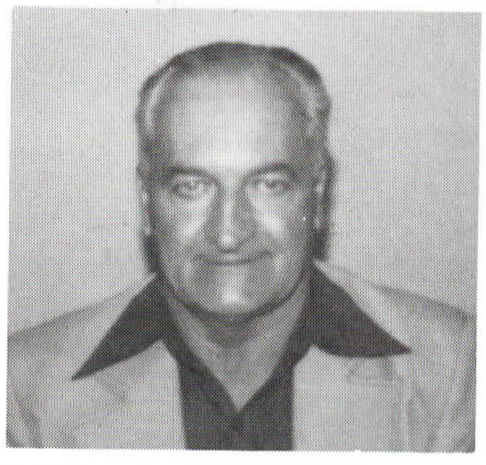
D. Kingdon, *Manager of Operations, was previously Mine Manager at the Highvale Mine.*



L. Carriere, *Mine Manager at Whitewood, previously Area Manager at Utility and Klimax.*

G. Korsa, *Mine Manager at Whitewood, previously Mine Manager at Roselyn.*

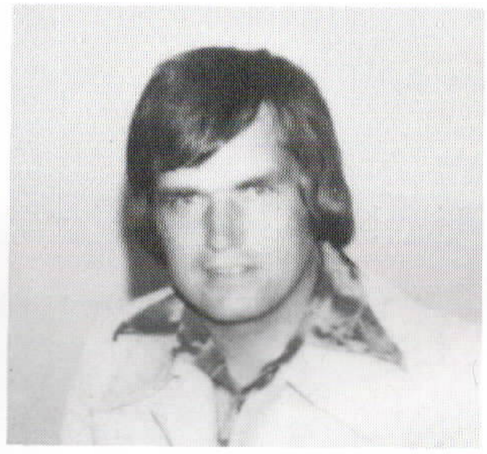
C. Jenish, *Area Manager at Utility and Klimax, previously Mine Manager, Klimax.*



L. Wagar, *Mine Manager at Klimax, previously Mine Manager at Whitewood.*

R. McBride *continues to head mine operations at the Vesta Mine.*

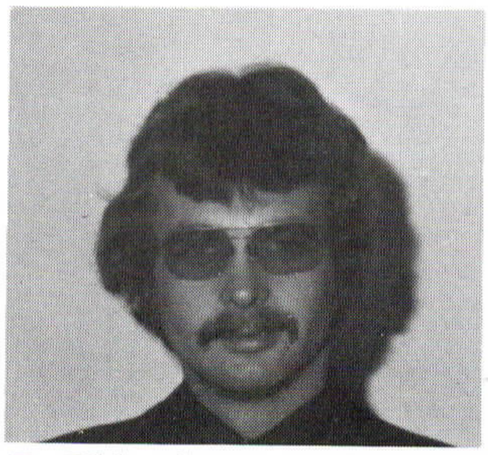
D. Meads, *Mine Manager at Roselyn, previously Assistant Mine Manager, Whitewood.*



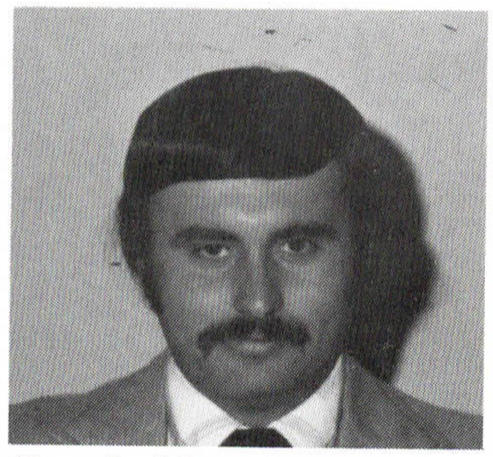
W. Kelly, *Mine Manager, Utility, previously was Assistant Mine Manager there.*

M. Hewitt, *continues as Superintendent of the Villeneuve operations.*

R. Wilsey *is Electrical Superintendent with added responsibility for maintenance.*



D. Sibley *has recently been named Operations Engineer.*



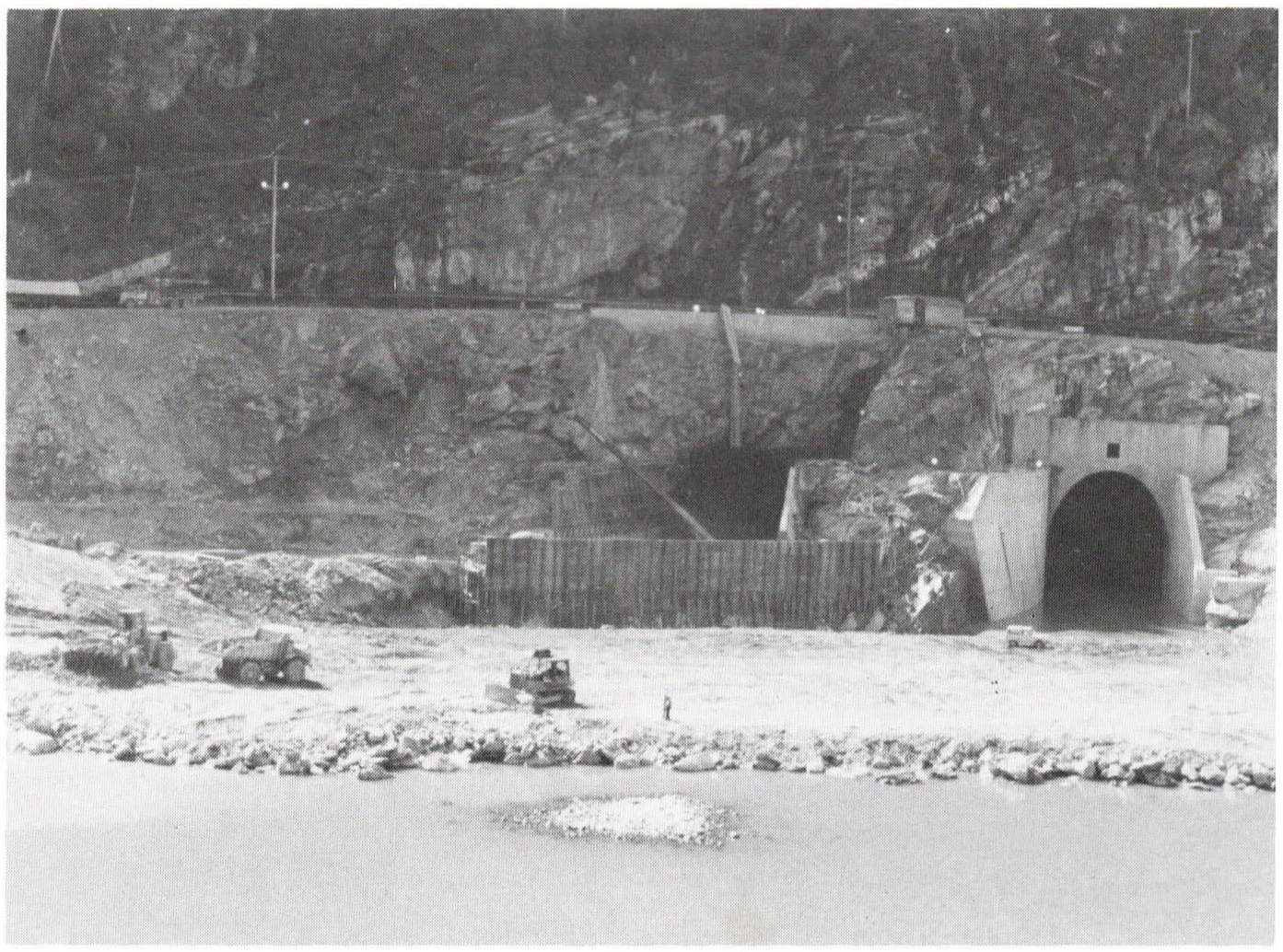
T. Jenish, *Maintenance Technician.*

Loram International Ltd.

Mica Project Meets Bonus Date

Progress Continues on Construction of B. C. Hydro's underground Mica Generating Station.

Left, testing and placing of gates in draft tube gate chambers. Above, traveller with arch forms being set up for arch pour in tailrace manifolds for Unit No. 5.



The Heavy Construction Division of Loram International Ltd. reported penstocks 1 and 2 were 100% complete in June and final finishing of penstock 3 in progress. Concrete work continued in draft tube gate chamber 5, tailrace manifolds for units 4, 5 and 6, the tailrace 2 outlet structure, powerhouse unit 3, and in penstocks 4, 5 and 6.

All work in draft tube tunnels, gate chambers and tailrace manifolds for the first three units was completed for the June 1 bonus date.

Left, tailrace No. 1 portal excavation (rock and overburden) was completed and the tailrace tunnel was flooded to meet June 1 schedule.

Techman Offers Wide Services

D. M. Morgan
President, Techman Ltd.

TECHMAN LTD. is an Engineering and environmental sciences consulting company in the Loram group. TECHMAN offers clients a broad range of services primarily oriented to resource development projects and in particular to coal mining; oil, gas and slurry pipelines; railway and mine haul road location and design studies; coal quality and preparation planning studies. The services provided include not only the engineering aspects but the equally important environmental and land use studies.

TECHMAN LTD. was incorporated in Alberta as a private company in 1969, and is licensed by the Association of Professional Engineers, Geologists and Geophysicists of Alberta to Practice professional engineering under Permit No. P432. TECHMAN maintains a full time permanent staff of professional engineers, geologists and ecologists supported by technicians, draftsmen and office staff. Additionally, TECHMAN, in association with the Loram Group of Companies, is able to draw on the resources and experience of many people qualified in the engineering aspects of project management and Construction and operating coal mines.

During the past several years TECHMAN has been engaged in numerous Canadian resource development projects including open pit mine and preparation plant studies for metallurgical coal projects and arctic pipelines. Other assignments have taken TECHMAN engineers as far afield as Jamaica for mine haul road studies and design: Argentina for Railway rehabilitation consulting; Nigeria for coal industry consulting; and Pakistan for a United Nations energy resources survey with TECHMAN having the primary responsibility for the coal industry evaluation.

Exploram Minerals Ltd.

Carl Kamm, President of Exploram, keeps in close touch with opportunities to explore and develop potential mines. The search for base and precious metals takes the company to widely separated locations for reconnaisance, and in many cases, detailed follow-up operations.

Part of the company's current schedule includes percussion drilling which is in progress on two wholly-owned properties in British Columbia. The operation is carried out to test for copper mineralization. Also proposed is a drilling program for an option property in the Yukon to test for lead, zinc and silver mineralization.

Properties are continually being submitted and some of these justify field examination to determine whether involvement is desirable. Examinations on such properties will be carried out in the Province of British Columbia, the States of Washington, Montana and Colorado. At other locations in Canada and the United States, a similar work will be done as new submissions are judged to warrant this action.

Some traverses will also be done (along with geochemical sampling) in several specific areas of B.C. and one specific area in Nevada. These are relevant to copper, molybdenum and uranium mineralization. Should results of economic interest be obtained, staking an acquisition would follow on behalf of the company.

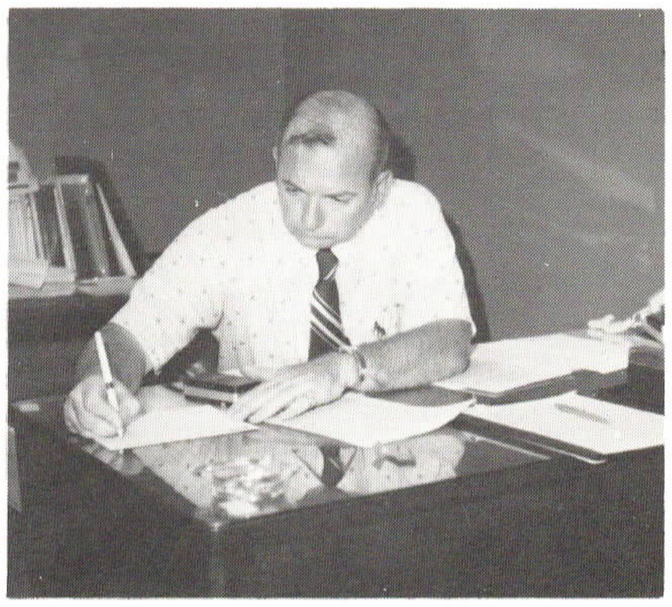
E. W. Costello retired from his post with the group of companies as Chairman of the Board of Loram in 1975. As a 30 year construction veteran who served as First President of the Pipeline Contractors Association, he was recently honored as a life member of that Association.

A.R.E.A. Visits

The American Railway Engineering Association Committees 22 (Economics of Railway Labor and Construction) and Committee 27 (Work Equipment) held a joint meeting at the Radison Inn, St. Paul, in June. Loram Maintenance of Way took part in the event as host company.

J. E. Gavin, Marketing Manager for the company, is Chairman of the Railway Supply Association which is involved with these two committees. He arranged for the meetings and reported a record attendance with over 230 present at the dinner.

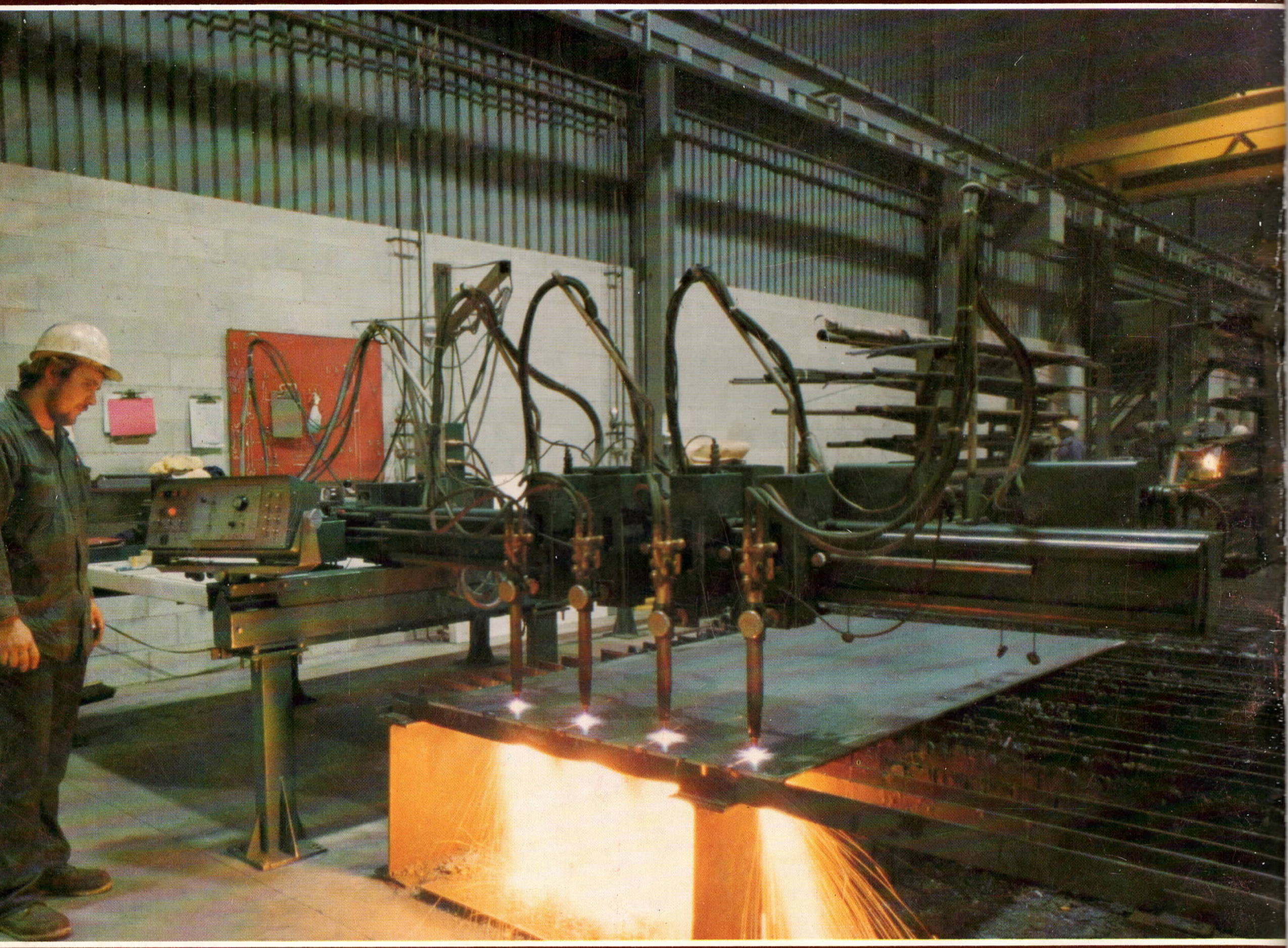
The meetings were highlighted by a tour of Burlington Northern's Northtown Yards and demonstration of a new locomotive crane by American Hoist and Derrick. During the committee activities several of the railroad men were able to visit our Hamel plant facilities.



J. E. (Jim) Gavin . . . active in railroad industry affairs.

Annual Barbecue Attracts Good Crowd

There was room aplenty for participants in the M.E.G.A. Annual Barbecue to relax and enjoy. Held at Sarcee Camp in Calgary, the countryside surroundings were ideal for the July get-together, and a program that offered afternoon and evening pastimes for everyone.

The accompanying photos are just a glimpse of activities organized to get the circulation moving — sports of all sorts, ample food for healthy appetites, and a dance to wind up the successful event.

Flame cutting of quarter-inch steel paves the way to fabrication of another machine in Loram's Minneapolis plant.